



UNIVERSITY of LIMERICK
OLLSCOIL LUIMNIGH

**Establishing premises for
best collaborative
practice when supporting
children with a
developmental language
disorder in school**

by

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A thesis submitted in fulfilment of the requirements for the
degree of Doctor of Philosophy at the University of Limerick

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Anne Murphy and Professor Paul Conway**

Submitted to the University of Limerick August 2019

Abstract

Background

Persistent difficulties in learning language can have significant implications for life. Effective inter-professional collaboration (IPC) between speech and language therapists (SLTs) and teachers is essential if the needs of children with developmental language disorders (DLD) are to be met in school, yet IPC is rare in practice. Differences in perspectives have been identified as a barrier to IPC. Agreed premises to underpin IPC would improve services and supports for children with DLD in schools.

Aims

The aims of this research were: to determine how well the needs of children with DLD are identified and are being met in Ireland; to characterise the perspectives of those involved in the collaborative delivery of supports in school for children with DLD; and to establish agreement about a set of proposed premises to underpin IPC.

Methods

A mixed methods design was used. First, a cross-sectional analysis of data collected from the Growing Up in Ireland (GUI) study was conducted. Then, an integrative review of the empirical, theoretical and policy literature across speech and language therapy and education was undertaken to determine whether a shared understanding about DLD exists that could inform the premises. Next, focus groups and interviews were carried out with key stakeholders (parents, speech and language therapists, teachers, and children with DLD) to develop the premises further. Finally, an online Delphi survey was undertaken to establish a consensus about proposed premises.

Results

Findings from the cross-sectional analysis indicated under-identification of speech and language needs and limited supports in schools for children with DLD in Ireland. From the literature, differences in perspectives were identified about the nature of DLD, how such needs can be assessed and how these are met in schools. Focus groups and interview data showed differences in views between children and practitioners about supports. After two rounds of a Delphi survey, consensus was reached on a set of premises to underpin IPC.

Discussion

Improving supports for children with DLD in Irish schools is required. The nature of the differences identified in the literature suggests that SLTs and teachers may benefit from inter-professional education opportunities when working with children who have DLD to enhance meaningful IPC. Findings from interviews with children with DLD demonstrate the unique perspective they can bring to decisions about supports in school, so their views should influence any premises that underpin services and delivery.

Conclusions

Four premises to underpin and improve IPC are proposed: the child with DLD is a being in their own right; DLD is a difference rather than a disorder; language is a tool for learning and connecting; and IPC is a means of ensuring the inclusion of the child with DLD in school. These premises provide a foundation upon which to develop a coherent set of principles and practices to support children with DLD in schools.

Declaration

My submission as a whole is not substantially the same as any that I have previously made or currently am making whether in published or unpublished form for a degree, diploma or similar qualification, at any university or similar institution. I am the author of this thesis and the principal author of the six manuscripts that form its core.

Signature: _____

Aoife Gallagher

Acknowledgements

I would like to offer my sincere thanks to Professor Alison Perry, Dr. Carol-Anne Murphy and Professor Paul Conway for their guidance and support throughout the last four years. I am particularly indebted to Professor Alison Perry, my primary supervisor, who continued to supervise the research through a sabbatical year and into the first year of her retirement. I have learned an enormous amount in her capable hands. Her guidance has allowed me to develop a solid basis upon which to continue to develop my research skills.

I am extremely grateful to the Health Research Board, Ireland who funded the research as part of the SPHeRE programme. The SPHeRE programme has provided a wealth of opportunities which have enabled me to develop my understanding of population health and health services research. Completing this programme has been a truly transformational experience. Thanks to my fellow SPHeRE scholars who listened, critiqued, supported and encouraged me without fail, throughout the four years.

A special thanks to the practitioners, researchers, parents and children who agreed to participate in the research. Without their participation, this doctoral thesis would not have been possible.

Thanks also to staff in the School of Allied Health at the University of Limerick who have supported this work. A special thank you to Dr. Katie Robinson and Dr. Rose Galvin for facilitating my national placement in year two of the SPHeRE programme.

I am also extremely grateful to those who helped with screening of papers, observations of focus groups and coding analyses.

Thank you to Jane Stokes, a mentor like no other, who impressed upon me from the first day I met her, the importance of questioning received wisdom in the speech and language therapy profession.

Thanks to my parents for their unquestioning support and for the expectation that I could achieve.

Finally, to the extraordinary men in my life: Duncan, Donncha, Fiachra and Lachlan. Your patience, understanding, encouragement and sense of humour have sustained me these last four years. Thank you for putting up with me and doing all of the housework. I think I may have finally finished my homework.

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List of Publications

This PhD thesis is based on the following research papers:

Gallagher, A.L., Galvin, R., Robinson, K., Murphy, CA., Conway, P.F. and Perry, A. (2019) 'The characteristics, life circumstances and self-concept of 13 year olds with a disability in ireland: A secondary analysis', (under review with *PLoS ONE*).

Gallagher, A.L., Murphy, CA., Conway, P.F. and Perry, A. (2019) 'Consequential differences in perspectives and practices concerning children with developmental language disorders: An integrative review', *International Journal of Language and Communication Disorders*, 54(4), 529-552.

Gallagher, A.L., Murphy, CA., Conway, P.F. and Perry, A. (2019) 'Engaging multiple stakeholders to improve speech and language therapy services in schools: An appreciative inquiry-based study', *BMC Health Services Research* [online], available: <http://dx.doi.org/10.1186/s12913-019-4051-z>.

Gallagher, A.L., Tancredi, H. and Graham, L.J. (2018) 'Advancing the human rights of children with communication needs in school', *International Journal of Speech- Language Pathology*, 20(1), 128-132.

Gallagher, A.L., Murphy, CA., Conway, P.F. and Perry A (2019) 'Establishing premises for best collaborative practice when working with children in school with developmental language disorders: A delphi survey', (under review with *Disability and Rehabilitation*).

List of Conference Presentations

Gallagher, A.L., Murphy, CA., Conway, P.F. and Perry, A. (2016) 'Examining the evidence of a shared cross-sectoral understanding in working with school-aged children and young people with speech, language and communication needs: A study protocol', presented at International Conference of the Association of Logopedics and Phoniatrics, Dublin, Ireland, August.

Gallagher, A.L., Murphy, A., James, E., Keane, M. (2016) 'Rhetoric or reality- exploring barriers and facilitators for speech and language therapists in meeting the needs of school-aged children with speech, language and communication needs in mainstream school', presented at International Conference of the Association of Logopedics and Phoniatrics, Dublin, Ireland, August.

Gallagher, A.L., Galvin, R., Robinson, K., Murphy, CA., Conway, P.F. and Perry A. (2016) 'The association between self-concept and disability among adolescents in Ireland: A secondary analysis of the Growing Up in Ireland (GUI) study', presented at Growing Up in Ireland Conference, Dublin, Ireland, November.

Gallagher, A.L., Murphy, CA., Conway, P.F. and Perry, A. (2017) 'Consequential differences across health and education about children with speech, language and communication needs', presented at British Education Research Association Conference, University of Sussex, UK, September.

Gallagher, A.L., and Doyle, J. (2017) 'Describing the life circumstances of 13 year olds with developmental disabilities in Ireland: A secondary analysis of the Growing Up in Ireland (GUI) study', presented at Growing Up in Ireland Conference, Dublin, Ireland, November.

Gallagher, A.L., Murphy, CA., Conway, P.F. and Perry, A. (2018) 'Co-designing the ideal speech and language therapy service with children who have speech, language and communication needs', presented at Children's Research Network of Ireland and Northern Ireland Conference, Dublin, Ireland, November.

Gallagher, A.L., Murphy, CA., Conway, P.F. and Perry, A. (2018) 'Engaging practitioners and service-users in the co-design of the optimal service to schools for children who have speech, language and communication needs', presented at SPHeRE Network Conference, Dublin, Ireland, January.

Gallagher, A.L., Murphy, CA., Conway, P.F. and Perry, A. (2018)
'Describing an optimal SLT service to schools from the perspective of practitioners, parents and children with developmental language disorders', presented at 10th European CPEOL Congress of Speech and Language Therapy, Cascais, Portugal, May.

Gallagher, A.L., Murphy, CA., Conway, P.F. and Perry, A. (2019)
'Establishing premises to guide best practice when working with children in school who have developmental language disorders', presented at SPHeRE Network Conference, Dublin, Ireland, February.

Gallagher, A.L., Murphy, CA., Conway, P.F. and Perry, A. (2019)
'Exploring agreement and disagreement amongst stakeholders about working with children who have developmental language disorder in school; A Delphi study', presented at Irish Association of Speech and Language Therapists Conference, Dublin, Ireland, May.

List of Invited Presentations

Gallagher, A.L. (2017) 'Comprehension difficulties between SLT and education about developmental language disorder', presented at National Special Interest Group in DLD, Portlaoise, Ireland, June.

Gallagher, A.L. (2017) 'Developmental language disorder: Taking action for best outcomes', presented at Department of Education Headquarters, Athlone, Ireland, October.

Gallagher, A.L. (2018) 'Understanding collaboration', presented at SLCN Research Group, University of Limerick, Limerick, Ireland, February.

Gallagher, A.L. (2018) 'Co-designing an optimal SLT service to schools for children with developmental language disorders ', presented at National Special Interest Group in DLD, Portlaoise, Ireland, June.

Gallagher, A.L. (2018) 'Engaging stakeholders in service decision-making', presented at National Council for Special Education, Dublin, Ireland, June.

Gallagher, A.L. (2018) 'Engaging multiple stakeholders in improving services to schools for children with developmental language disorders', presented at Newcastle University SLCN Research Group, Newcastle, UK, October.

Gallagher, A.L. (2018) 'Involving children to improve SLT services to schools', presented at Sheffield NHS Trust, Sheffield, UK, October.

Gallagher, A.L. (2018) 'Meeting the needs of children with developmental language disorder in school', presented at National Educational Psychology Network Forum, Limerick, Ireland, October.

Gallagher, A.L. (2019) 'Engaging stakeholders in service improvement', presented at University College Cork, Cork, Ireland, January

List of Abbreviations

ASD	Autistic spectrum disorder
ASHA	American Speech-Language-Hearing Association
CSO	Central Statistics Office (Ireland)
DEIS	Delivering Equality of Opportunity in Schools
DLD	Developmental language disorder
EBD	Emotional/behavioural disorder
EPSEN	Education for Persons with Special Education Needs
GUI	Growing Up in Ireland Study
HRB	Health Research Board (Ireland)
HSE	Health Service Executive (Ireland)
IASLT	Irish Association of Speech and Language Therapists
ICF	International Classification of Functioning, Disability & Health
LD	Learning disability
NCSE	National Council for Special Education
PSD	Physical/sensory disability
RCSLT	Royal College of Speech and Language Therapists
SLT	Speech and Language Therapist
SPA	Speech Pathology Australia
SPHeRE	Structured Population and Health-services Research Education
UNESCO	United Nations Educational, Scientific & Cultural Organization
WHO	World Health Organization

Chapter 1: Background to the thesis

Conventions used

This doctoral thesis is concerned with improving the delivery of supports in school to children with speech, language and communication needs (SLCN). People with SLCN are considered to have a health need, so are managed by a speech and language therapist (SLT) appointed through the health service. During their school years, children with SLCN are considered to have both health and educational needs. As a result, SLTs *and* class teachers share a responsibility for meeting their needs. This thesis is about a subgroup of children with SLCN who have difficulty learning language with no obvious cause. The literature is replete with differing terminology in relation to this group of children. Throughout this thesis, the term **developmental language disorder** (DLD) is used when referring to these needs, as recommended by Bishop *et al.* (2017). In the thesis, the term **supports** is used to refer to any interventions and/or adaptations to instruction/practice required in order for the child with DLD to be able to learn and participate in school. This term has been chosen because it is used in special education and disability policy documents in Ireland.

A central focus of the thesis is cross-sectoral working between SLTs and teachers, considered to be an essential component of an effective speech and language therapy service to schools (Rix *et al.* 2013; Irish Association of Speech and Language Therapists 2017). Various terms are used interchangeably in the literature to refer such working (McCartney 2002). In line with the World Health Organization (2010), the term **inter-professional collaboration** (IPC) is used in this thesis to refer to

professionals from different backgrounds, in this instance SLTs and teachers, working towards shared goals with the desired outcome of “collaborative advantage” (Vangen and Huxham 2013). In this thesis, **collaborative advantage** means improved outcomes for the child with DLD.

Various organisational bodies are involved in and/or influence the delivery of supports for children with DLD in schools in Ireland. These include the Health Services Executive (HSE), the National Council for Special Education (NCSE) and the Irish Association of Speech and Language Therapists (IASLT). The HSE is the public body responsible for the provision of health and social services to the Irish population. The NCSE is the government body tasked with the delivery of special educational needs supports in schools. The IASLT is the recognised professional body representing SLTs in Ireland.

Finally, although children with DLD are not currently considered eligible to receive disability services by the HSE, the definition of DLD is closely aligned with definitions of disability within Irish legislation. Therefore documents related to disability as well as special education are discussed as these are relevant to SLT practice when working with children who have DLD in school.

Development of the research aims

The motivation for this doctoral study came from my clinical observations when working as an SLT in schools supporting children with DLD. During this time, I noted that effective IPC between SLTs and

teachers was difficult to achieve. This was observed to be the case across many different service contexts. Nevertheless, I noted that some SLTs and teachers collaborated very effectively, despite many obvious structural barriers to them doing so.

Preliminary engagement with the literature indicated that IPC across SLTs/teachers had been a research focus for at least two decades (Law *et al.* 2000; McCartney 2000; McCartney 2002; Giangreco *et al.* 2010), and that many barriers to such working have been identified, both at an organisational and at a socio-relational level (McCartney 1999; Lindsay *et al.* 2002). It was noted that one barrier frequently discussed was a lack of shared understanding (of the disorder) between SLTs and teachers (Dockrell *et al.* 1997; McCartney 1999; McCartney *et al.* 2009; Dockrell and Howell 2015; Glover *et al.* 2015).

At the time of planning this doctoral study, major policy changes related to funding and the delivery of supports in schools for children with special educational needs were being proposed (Department of Education and Skills 2015; Department of Education and Skills 2017). The aim of these changes was to facilitate the collaborative delivery of supports to children with SLCN in Irish schools. Given the many documented barriers to SLT/teacher IPC in the literature, the need to support practitioners in how to work effectively together was highlighted.

In a different clinical context, Grunwell (1983) proposed that premises should be established when there is a lack of clarity about best practice. She defined premises as “primary, in that they state the

fundamental theoretical framework underlying a therapeutic approach” (Grunwell 1983, p.161). These are necessary, according to Grunwell (1983), in order to overtly state a coherent set of underlying principles and then design procedures (interventions) for practice. Thus, premises, principles and practices operate as three levels of intervention, each of which is informed by the other. Premises are the core constructs from which agreed principles are developed and, based on these, practices are derived. The overall aim of this thesis is to establish a set of agreed *premises* to inform the collaborative practice of SLTs and teachers when supporting children with DLD in Irish schools.

Thesis outline

This thesis is presented as eight chapters. In chapter 1, terms are defined, motivation for the research is explained, and the thesis outline is presented. In chapter 2, the nature and characteristics of DLD are discussed, current policy and practice are outlined and a brief review of the literature is provided to highlight gaps in the knowledge about IPC involving SLTs and teachers. This leads to an overview of the aims and objectives, the design, and the theoretical framework of the research. The subsequent three chapters (3-6) comprise six manuscripts - four research articles, a policy brief and a commentary paper. Three of these papers have been published in peer-reviewed academic journals, and two are currently under review. Each chapter begins with an outline of the aims of the papers and the research questions.

In chapter 3, the findings of the first study conducted as part of the doctoral research are reported (**Paper I**). This study was a cross-sectional

analysis of population-based data about children with and without disabilities in Ireland. The aims of this study were to describe the life circumstances of Irish 13 year olds and to ascertain the educational supports being received by those with a disability in the sample. A further aim was to explore the association between the children's self-concept scores and their disability diagnosis. The study was a first step required in the formative phase of the doctoral research in order to establish whether improvements were necessary in the delivery of supports for Irish children in school with DLD. The paper, referred to as Paper I in the thesis, has been re-submitted following initial review, to PLoS ONE (as at 01.08.19).

Chapter 4 includes **Paper II** in which the findings of the second study undertaken as part of the doctoral work are reported. In this study, an integrative review of the literature across the fields of speech and language therapy and education was conducted. The purpose of this study was to characterise the perspectives across the fields and to examine the extent to which a shared understanding about DLD exists that could underpin the development of premises for collaborative practice involving SLTs and teachers. This paper was peer-reviewed and published in the *International Language and Communication Disorders*.

Chapter 5 comprises three papers related to the third study undertaken as part of the doctoral research. **Paper III** reports the findings of this third qualitative study in which key stakeholders (SLTs, teachers, parents and children with DLD) were engaged to co-design their optimal services and supports to school. The purpose of this study was to inform the development of the premises for collaborative practice, using an approach

(appreciative inquiry) deemed necessary in light of the differences in perspective and the barriers emerging from the integrative review undertaken in study two. This approach does not assume a shared understanding of a problem in need of solving, rather it allows participants to consider what their optimal vision is related to the topic of inquiry. In this context, it allowed stakeholders to describe their optimal services and supports in school for children with DLD. This paper was peer-reviewed and published in BMC Health Services Research. **Paper IV** is a related policy brief, summarising the findings of semi-structured interviews conducted as part of study three, which involved children who have DLD. In this brief, the views of the children about their ideal supports in school are summarised for policy decision-makers. This policy brief was launched in October 2018. **Paper V** is a commentary paper which follows on from the findings from study 3, in which the importance of the contribution of the child with DLD in decision-making about supports is highlighted. In this commentary, a conceptual model is proposed to guide the practice of SLTs working in schools, which ensures the right of the child with DLD to have influence in decisions about their supports in school. This paper was peer-reviewed and published in the International Journal of Speech-Language Pathology.

Chapter 6 comprises the final paper, **Paper VI**. In this paper, the findings of the fourth study undertaken as part of this doctoral research are reported. The purpose of this Delphi study was to establish consensus about contentious topics identified in earlier phases of the research, particularly the findings for the semi-structured interviews with the children. This paper

has been submitted to Disability and Rehabilitation (as at 1.05.19), and is currently under review.

In Chapter 7, the findings from each study are summarised and contextualised within the broader literature and methodological considerations are discussed. Chapter 7 ends with a short reflective narrative from the perspective of researcher undertaking the research. In the final chapter of the thesis, the implications of the research for practice and future research are discussed. Figures and tables are numbered according to the papers. References and appendices from each paper are included in the pertinent chapter.

References

- Bishop, D., Snowling, M.J., Thompson, P. and Greenhalgh, T. (2017) 'Phase 2 of catalise: A multinational and multidisciplinary delphi consensus study of problems with language development: Terminology', *Journal of Child Psychology and Psychiatry*, 58 (10), 1068-1080.
- Department of Education and Skills (2015) *Minister for education and skills announces the development of a new inclusion support service within the national council for special education* [press release], available: [https://merrionstreet.ie/en/News-Room/Releases/Minister_for Education and Skills announces the development of a new Inclusion Support Service within the National Council for Special Education_1.html](https://merrionstreet.ie/en/News-Room/Releases/Minister_for_Education_and_Skills_announces_the_development_of_a_new_Inclusion_Support_Service_within_the_National_Council_for_Special_Education_1.html) [accessed 16 Nov 2015].
- Department of Education and Skills (2017) *Circular to the management authorities of all mainstream primary schools special education teaching allocation*, Athlone: Department of Education and Skills, available: https://www.education.ie/en/circulars-and-forms/active-circulars/cl0013_2017.pdf [accessed 27 June 2019].
- Dockrell, J., George, R., Lindsay, G. and Roux, J. (1997) 'Problems in the identification and assessment of children with specific speech and language difficulties', *Educational Psychology in Practice*, 13(1), 29-38.
- Dockrell, J. and Howell, P. (2015) 'Identifying the challenges and opportunities to meet the needs of children with speech, language and communication difficulties', *British Journal of Special Education*, 42(4), 411-428.
- Giangreco, M.F., Prelock, P.A. and Turnbull, H.R., 3rd (2010) 'An issue hiding in plain sight: When are speech-language pathologists special educators rather than related services providers?', *Language, Speech, and Hearing Services in Schools*, 41(4), 531-538.

- Glover, A., McCormack, J. and Smith-Tamaray, M. (2015) 'Collaboration between teachers and speech and language therapists: Services for primary school children with speech, language and communication needs', *Child Language Teaching and Therapy*, 31(3), 363-382.
- Grunwell, P. (1983) 'Phonological therapy: Premises, principles and procedures', in Edwards, M., Miller, C.J. and de Montfort-Supple, M., eds., *XIXth Congress of the International Association of Logopedics and Phoniatrics*, University of Edinburgh, Scotland, 14-18 Aug, Switzerland: Karger, available: <http://dx.doi.org/10.1159/000316868>.
- Irish Association of Speech and Language Therapists (2017) *Supporting children with developmental language disorder in ireland: Position paper and guidance document*, Dublin, available: <http://www.iaslt.ie/documents/public-information/childhood%20speech%20and%20language/dld%20position%20paper%20final%2023may2017.pdf> [accessed 29 June 2019].
- Law, J., Peacey, N. and Radford, J. (2000) 'Provision for children with speech and language needs in england and wales: Facilitating communication between education and health services', 18(2), 91-101.
- Lindsay, G., Soloff, N., Law, J., Band, S., Peacey, N., Gascoigne, M. and Radford, J. (2002) 'Speech and language therapy services to education in england and wales', *International Journal of Language and Communication Disorders*, 37(3), 273-288.
- McCartney, E. (1999) 'Barriers to collaboration: An analysis of systemic barriers to collaboration between teachers and speech and language therapists', *International Journal of Language and Communication Disorders*, 34(4), 431-40.
- McCartney, E (2000) 'Include us out? Speech and language therapists' prioritization in mainstream schools', *Child Language Teaching and Therapy*, 16(2), 165-180.

- McCartney, E. (2002) 'Cross-sector working: Speech and language therapists in education', *Journal of Management in Medicine*, 16(1), 67-77.
- McCartney, E., Ellis, S. and Boyle, J. (2009) 'The mainstream primary classroom as a language-learning environment for children with severe and persistent language impairment – implications of recent language intervention research', *Journal of Research in Special Educational Needs*, 9(2), 80-90.
- Rix, J., Sheehy, K., Fletcher- Campbell, F., Crisp, M. and Harper, A. (2013) *Continuum of education provision for children with special educational needs;a review of international policies and practices*, available: [http://www.ncse.ie/uploads/1/Continuum of Provision website summary.pdf](http://www.ncse.ie/uploads/1/Continuum_of_Provision_website_summary.pdf)
- Vangen, S. and Huxham, C. (2013) 'Building and using the theory of collaborative advantage' in Keast, R., Mandell, M. P. and Agranoff, R., eds., *Network theory in the public sector: Building new theoretical frameworks*, New York: Routledge, 51–69.

Chapter 2: Literature Review

Developmental Language Disorder

Characteristics of Developmental Language Disorder

Most children learn language without difficulty. However, developing the skills necessary to become an effective communicator is a challenge for some. This thesis is concerned with a particular subgroup of children with speech, language and communication needs (SLCN), who constitute approximately seven percent of the school-aged population, and who struggle to learn language without any attributable biomedical cause (Tomblin *et al.* 1997; Law *et al.* 2000; Norbury *et al.* 2016).

Since 2010, there has been significant debate regarding terminology and diagnostic criteria in relation to this population (Bishop 2014; Norbury 2014; Reilly *et al.* 2014; Reilly *et al.* 2014; Bishop 2017). This debate included a multi-national consensus process, as a result of which the term *developmental language disorder* (DLD) was recommended to be used. A new definition of the needs of children with DLD and criteria for identification were also agreed as part of that consensus process, and a classification model of SLCN was proposed (Bishop *et al.* 2016; Bishop *et al.* 2017). Previously the definition of DLD was based on the idea of a specific language deficit alongside normal non-verbal skills, but such discrepancy criteria are no longer recommended to be used (Botting 2005; Norbury 2014). DLD is now defined in relation to the persistence and impact of the difficulties, as “*language problems enduring into middle childhood and beyond with a significant impact on everyday interactions and/or educational functioning*” (Bishop *et al.* 2017, p.1070). The model

agreed as part of the consensus process is presented in Figure 1. The model includes all known SLCN - those related to the understanding and use of language as well as speech (the ability to articulate sounds clearly). The needs of children with DLD are represented by the inner (pink) circle.

One of the defining characteristics of DLD is the heterogeneous nature of the condition as children with DLD can present with difficulties in all or any combination of the language domains listed. These include difficulties with **phonology** (sounds), **syntax** (the rules of grammar) (Rice and Wexler 1996; Rice *et al.* 1998; van der Lely *et al.* 1998; Bishop *et al.* 2000; van der Lely and Battell 2003; van der Lely 2005), **morphology** (word endings that change the meaning of the word) (Oetting *et al.* 2009), **word learning** (problems processing the sounds and/or the meaning of new words) (McGregor *et al.* 2002; Storkel 2011; McKean *et al.* 2014) and **narrative tasks** (telling a story effectively) (Botting 2002; Wetherell *et al.* 2007; Andreu *et al.* 2011; Domsch *et al.* 2012). Further areas of difficulty may be seen in **verbal memory** (being able to remember language long enough to process it) (Baddeley 2003; Alloway and Archibald 2008; Archibald and Harder Griebeling 2016), **discourse** (rules of conversations) and **pragmatics** (how to use language appropriate to the context and audience) (Schaeffer 2003; Gerber *et al.* 2012).

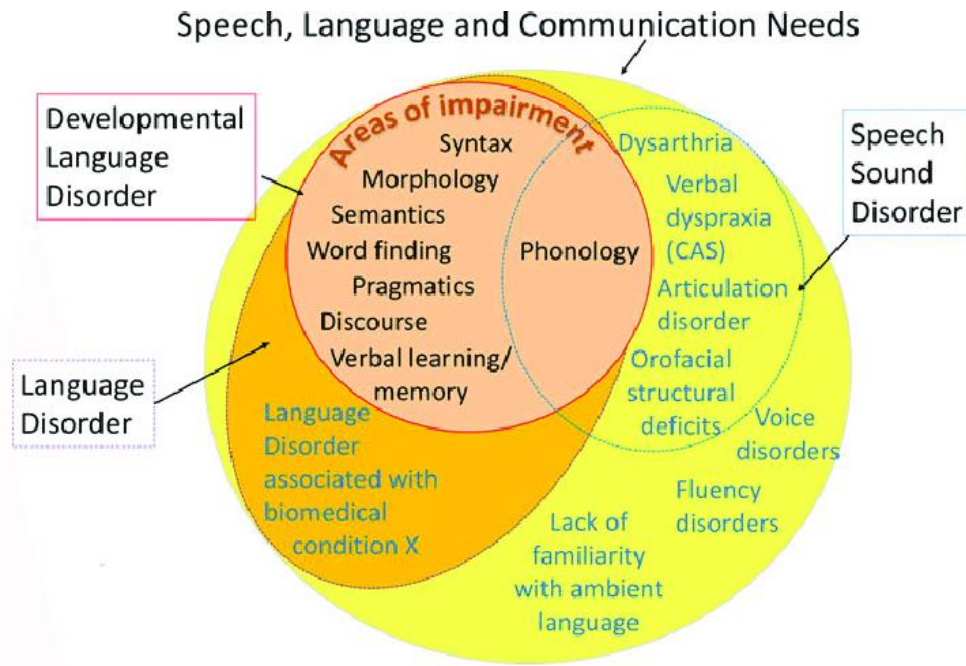


Figure 1. Classification system for childhood speech language and communication needs (Bishop *et al.* 2017).

There is no single cause of DLD. It is likely that a combination of biological, genetic and environmental factors interact to result in difficulties with learning language (Bishop 2001; Schwartz 2010; Bishop and Leonard 2014). In a systematic review and meta-analysis of epidemiological studies, Rudolph (2017) identified several risk factors of DLD. These include: a positive family history of DLD and/or literacy difficulties; gender (more boys than girls have DLD); and the presence of other neuro-developmental difficulties.

Findings from epidemiological studies in the UK, Canada, Australia and the USA have contributed to our understanding of the language trajectory of such children. There is now robust evidence to suggest that only a very small proportion (5%) of children identified as late talkers at 2 years of age will go on to develop persistent language difficulties

(Ukounmunne *et al.* 2012; Eadie *et al.* 2014; McKean, Reilly *et al.* 2017). Conversely, there is evidence to suggest that a further proportion of children (around 7%) with no presenting difficulties at 2 years will be diagnosed with DLD later on in their school years (McKean, Wraith *et al.* 2017). Findings from studies also show that stability of the diagnosis increases over time and that language difficulties that are evident at 4 years will almost certainly persist beyond childhood (Eadie *et al.* 2014).

Another characteristic of DLD is that the profile of need changes across the lifespan. Children of preschool-age with DLD may be slow to develop words and to link words together (Conti-Ramsden and Durkin 2012a) while later in adolescence there may be difficulties with spoken and written language and/or using language for higher level thinking skills such as problem solving, predicting and inference (Nippold 1993; Joffe *et al.* 2012; Nippold 2016).

There is some debate among researchers as to how DLD should be conceptualised. DLD as a categorical diagnosis has come under serious scrutiny in recent years (Pennington and Bishop 2009; Rice 2016; Snow 2016). This is partly because of the high proportion of children with DLD presenting with symptoms which overlap with symptoms of other developmental diagnostic categories. While some diagnostic categories, such as autistic spectrum disorder (ASD), appear to have distinct boundaries with DLD (Bishop 2010; Rice 2016; Leonard 2017; de Wit *et al.* 2018), this is not the case for diagnoses which subsume weaknesses in nonverbal cognitive functioning and/or motor abilities (Leonard and Hill 2014). As a result, it has been proposed that DLD needs to be re-conceptualised as a

spectrum disorder or a neuropsychological syndrome (Lancaster and Camarata 2019; Tomas and Vissers 2019).

Theoretical accounts of Developmental Language Disorder

Although progress has been made in establishing consensus about terminology, there are competing theoretical accounts of why children with DLD struggle to learn language. Proponents of a nativist-based view hold that a child has an innate ability to learn language and that DLD is accounted for by deficits in their linguistic (grammatical) knowledge or rules (Pinker and Jackendoff 2005; van der Lely 2005; Alloway *et al.* 2017). Interventions based on this account of DLD have targeted deficits in the rules of grammar (Ebbels 2007; Levy and Friedmann 2009), assuming that once the parameters/ rules are set, improvements will generalise across related structures or properties of language (Connell 1988).

An alternative proposition is that DLD is best explained by limitations in the non-linguistic processing abilities of the child, which present as specific deficits in language (Leonard *et al.* 2015). Such limitations may be related to deficits in general processing capacity (Bishop *et al.* 2000; Leonard 2009), limited space and/or to speed of processing (Tallal *et al.* 1998) and/or weaknesses in particular processing mechanisms, such as in auditory-perception and/or in phonological short term working memory (Gathercole 2006; Kuusisto *et al.* 2017; Archibald 2018). Findings from a systematic review of the efficacy of interventions to improve the auditory processing abilities of children with DLD are inconclusive (Fey *et al.* 2011). Where improvements have been reported in processing skills,

these have not been shown to generalise to language tasks (Gillam *et al.* 2008; Ebert and Kohnert 2009).

Findings from cross-linguistic studies show that children with DLD present with different clinical features, depending on the language being acquired (Leonard 2014). For example, Spanish and Italian-speaking children with DLD do not have difficulty in using tense and agreement in the way that English-speaking children with DLD do (Bortolini *et al.* 1997; Bedore and Leonard 2001). This suggests that the type of language being acquired has more of an influence on language learning than has been previously thought (Leonard 2014).

An “emergentist” view of language learning, as a product of interactions between the language environment of the child and their learning capabilities, has recently been proposed (Evans 2001; MacWhinney 2004; MacWhinney 2006). The focus of research based on this account include the ways in which different constraints in the language learning context, factors related to language input, and/or the abilities of a child to pick up “cues” about language can be manipulated to facilitate language learning. The strength of this approach, according to Evans (2001), is that it can inform what can be done to facilitate language learning (Evans and Levinson 2009).

Most researchers acknowledge that no single theory of DLD fully accounts for the condition and that further evaluation is warranted to determine which theory, perhaps in combination with others, can result in best outcomes for this population (Evans 2001; Leonard 2017).

Implications of Developmental Language Disorder

Children with DLD are of concern for several reasons. This condition is associated with poor outcomes in adulthood. Durkin and Conti-Ramsden (2010) compared mental health outcomes in later adolescence for those with language difficulties in a clinical sample of children (N=100) recruited from language units¹ in the UK. They reported poor emotional health (self-reported depression and anxiety) among those with a history of language disorders, compared with their typically-matched peers. Conti-Ramsden and Durkin (2012b) identified difficulties in gaining employment and social isolation in the same clinical sample. Internationally, these associations have been replicated in population-based studies. Law *et al.* (2009) explored literacy, mental health and employment outcomes of a birth cohort of 17,196 children in the UK with a history of DLD and they reported poor outcomes on all three measures. Specifically, the odds of poor mental health were five times greater for adults with a history of language difficulties than for those without such a history. Johnson *et al.* (2010) and Beitchman *et al.* (2014) have reported similar findings from the USA and Canada.

Difficulties with language may have a negative effect on the development of other skills. Specifically, on decoding written texts (Snowling and Hulme 2006; Bowyer-Crane *et al.* 2008) and understanding the meaning of written texts (Kelso *et al.* 2007; Fraser and Conti-Ramsden 2008; Lucas and Frazier Norbury 2015). There is some evidence to suggest

¹ Language units are specialist classrooms attached to mainstream schools in the UK, for children with severe language disorders of primary age.

that mathematical development is also implicated (Cowan *et al.* 2005; Donlan *et al.* 2007; Archibald *et al.* 2013; Cross *et al.* 2019).

Problems with language have been shown to negatively affect social, emotional and behavioural development. Children with DLD in school have reported difficulty in initiating and maintaining friendships (Markham *et al.* 2009), with many reporting loneliness and/or difficulties in school related to bullying and exclusion (Palikara *et al.* 2009). There is also a strong association between behaviour problems and expressive language disorders (Girard *et al.* 2016), pragmatic language disorders (Law *et al.* 2015), social cognition (Botting and Conti-Ramsden 2008), and comprehension difficulties (Benner *et al.* 2002; McKean, Reilly *et al.* 2017). This may be due to frustration of being unable to understand and resolve situations using language and/or a lack of ability to express feelings. Further, children with DLD reportedly score lower on self-esteem (Jerome *et al.* 2002; Wadman *et al.* 2008) and self-efficacy measures (Lindsay *et al.* 2002) compared with their typically-developing peers. There is little published data about the self-concept of children with DLD in Ireland.

Of further concern, DLD is relatively under identified compared with other developmental difficulties such as Autistic Spectrum Disorder (ASD) and dyslexia, despite being several times more prevalent than these conditions (Dockrell and Howell 2015). In the UK, researchers have estimated that up to 50% of school-age children with DLD are not known to services so do not receive speech and language therapy supports (Lindsay *et al.* 2010; Royal College of Speech and Language Therapists 2018). This

may be due in part to the ‘invisible’ nature of the condition. Many language difficulties, such as problems with comprehension, are not directly observable and children with DLD may hide their difficulties well by developing compensatory strategies to cope. DLD is difficult to identify because these needs rarely occur in isolation and many developmental difficulties which co-occur with the condition are more easily recognisable. As a result, language needs may be missed. Findings from studies in pupil referral units² and youth justice settings³ in the UK and in Australia, for example, show high levels of unidentified language difficulties among young people with EBD (Gregory and Bryan 2011; Hughes *et al.* 2017).

The school years are particularly challenging for the child with DLD. Most activities in the classroom require an ability to understand and use spoken and written language, and to learn new vocabulary without explicit teaching (Dockrell and Lindsay 1998). Many children with DLD struggle to follow instructions, to understand written texts and to retain new words. Thus the child with DLD is at significant disadvantage, compared with their typically-developing peers, when accessing the curriculum.

In summary, DLD is a highly prevalent yet poorly identified condition, associated with lifelong negative sequelae for the individual. Difficulties with language are pervasive- meaning they can negatively affect the development of other important skills in childhood. The school years are particularly challenging for the child with DLD as language plays a central role in learning. SLTs have a crucial role in supporting the child in this

² Educational settings in the UK, attended by children and young people who have been permanently excluded from school as result of severe behavioural difficulties.

³ Institutions for young people who have been found guilty of a criminal offence.

setting. Most studies about children with DLD have been conducted in the UK, US and Australia and there is a paucity of published data available about school-aged children with DLD in Ireland.

Policy and practice context

Policy and legislation guiding the practice of SLTs working in schools

The work of SLTs in schools is informed by policies and legislation across health and education. Cross-sectoral working has been recognised over many years as essential to meeting the additional needs of children in school, both internationally and in Ireland (United Nations Educational, Scientific and Cultural Organization 1994; Irish National Teachers' Organization 2001; Department of Education and Science 2007; World Health Organization 2011; Department of Children and Youth Affairs 2013; Irish Association of Speech and Language Therapists 2016).

One of most influential documents for practitioners working with children in a school with special educational needs (SEN)⁴ is the Salamanca statement (United Nations Educational, Scientific and Cultural Organization 1994). This agreement, signed by 300 countries of which Ireland was one, sets out a commitment to inclusive education for all children. Effective cross-sectoral working was a key action identified in this document.

In the World Health Organization (WHO) report on disability, there was also recognition that effective cross-sectoral working is essential to meet the needs of children with disabilities in schools (World Health Organization 2011). This report highlights the need for *integrated* models of health service delivery in schools (World Health Organization 2012, p.220). Although the terms related to cross-sectoral working are not fully operationalised in this report, a framework specifically for IPC was

⁴ Policy documents in education use the term “*special educational needs*” as a broad classification which includes all children in school who require additional support for learning. Children with DLD are considered to have SEN.

produced by the WHO (2010). In this framework IPC was defined as occurring when, “professionals from different backgrounds working closely together to meet *shared goals*, in order to improve outcomes for the service user” (World Health Organization 2010, p.17).

The need for effective cross-sectoral working is also recognised in current Irish health service strategy “*Progressing Disabilities*” where reference is made to integrated models of service delivery to schools (Health Service Executive 2013)⁵. The document also details important transition points when collaborative planning of supports is particularly important for children with disabilities. A recently updated position paper on meeting the needs of children with DLD, produced by the Irish Association of Speech and Language Therapists (IASLT), also identifies “*partnerships and collaboration*” as a core component of its action plan stating that, in addition to partnerships with parents, “jointly delivered therapist...teacher interventions are a required component of effective intervention” (Irish Association of Speech and Language Therapists 2017, p.60).

Recognition of the importance of cross-sectoral working in health is echoed in education. The National Council for Special Education (NCSE) describes the model of support in schools in Ireland as, *a community of provision*, defined as, “*the collective delivery of services broadly related to learning health and welfare*’ which ‘*acknowledges the significance of ... collaboration at all levels*” (Rix *et al.* 2013, p.2). In this document there is reference to shared responsibility across the sectors of health and education

⁵ Many children with DLD in Ireland are not currently eligible for “disability” services as defined by the Health Service Executive unless they present with several co-occurring needs.

for collaborative planning and delivery of supports to meet the needs of children with SEN. Professional guidelines for teachers in both primary and secondary school also refer to the need for collaboration in planning and delivering supports, with particular reference to children who have enduring and/or complex needs (Department of Education and Skills 2017).

In an attempt to facilitate the delivery of collaborative models of support across health and education in schools, a national reference group was set up by the HSE in 2009. The group, which included representatives from the NCSE and the HSE, proposed the need for “network teams”⁶ of health professionals from a range of different backgrounds, who would work collaboratively with teachers in schools. The proposed model of working included a clear definition of IPC and set out some determinants of successful collaboration, such as good communication, and the need for shared protocols and care pathways (Health Service Executive 2012). There is little available documentation to ascertain whether or not these network teams have been successfully implemented, nonetheless these proposals highlight a policy commitment to such working.

Cross sectoral working is not just a policy aspiration in Ireland. Two legislative acts set out the obligations of health professionals when working with school-aged children with disabilities. The *Education for Persons with Special Educational Needs (EPSEN) Act* (Disability Act 2005) and the *Disability Act* (Disability Act 2005) both specify a legal requirement to contribute to joint assessment, planning and delivery of supports in schools.

⁶ It is not clear how many network teams were successfully set up nationally since this report was published.

Thus cross-sectoral working has been a policy priority, both internationally and in Ireland, across health and education, for many years, and is seen as a means by which the needs of children with SEN/disabilities in school can be met. Such working is also legislated for in Irish law. While frequently recommended however, terms used are not operationalised, providing little clarity for practitioners about the exact nature of IPC and/or how this can be achieved.

Current speech and language therapy models in schools

Suleman *et al.* (2014) provide a useful framework for describing speech and language therapy service delivery models to schools. In Figure 2, service models are divided into two categories; supports delivered *outside the classroom* and *class-based* supports. These delivery models are positioned on a collaborative continuum, from left to right.

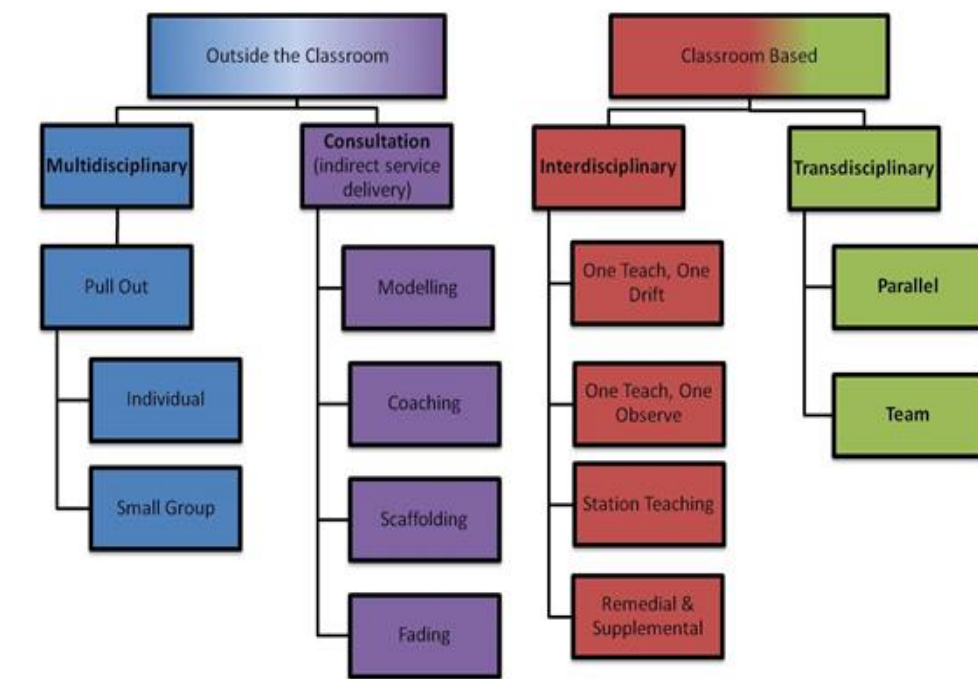


Figure 2. Speech and language therapy service delivery models to schools (Suleman *et al.* 2014).

Outside the classroom models, according to the framework, involve *multi-disciplinary* and/or *consultative* working. Multi-disciplinary working is defined as professionals planning and delivering supports independently of each other. While there may be communication between the SLT and teacher, this is to inform the other professional of progress and/or future plans for intervention (Suleman *et al.* 2014). Consultative models in this context involve the SLT advising and supporting staff in a school for them to carry out interventions prescribed by the SLT. In both models, the goals for intervention and methods used are SLT profession-specific, rather than being jointly agreed. Neither model, according to Suleman *et al.* (2014) encompasses IPC.

Class-based supports involve *inter-disciplinary* and/or *transdisciplinary* working, both of which, according to this framework, involve IPC. Inter-disciplinary models involve SLTs and teachers delivering supports together, with shared goals, but each discipline may use their own methods and maintain distinct professional roles. Transdisciplinary working involves shared roles and responsibility, with the possibility of developing new methods together that may not sit within traditional professional roles. According to Suleman *et al.* (2014), inter-disciplinary and transdisciplinary models are optimal when supporting children with DLD in school, as working in this way allows the SLT and teacher to optimise how language is used for teaching and learning.

These models are rare in practice. Findings from annual surveys of SLTs working in schools in the USA by the American Speech-Language-Hearing Association (ASHA) show the preferred model of working is *multi-*

disciplinary, with regular communication between the SLT and teacher (Brandel and Loeb 2011). In the UK, a national review of services for children with SLCN shows the most common model of working in schools is *consultative*, where the delivery of interventions is delegated to others in school - typically to teaching assistants - who are provided with a written programme of SLT activities to carry out with a child (Bercow 2008; Royal College of Speech and Language Therapists 2018). Additional support for implementing an SLT programme is sometimes offered as part of this model, such as training for school staff and/or modelling of speech and language therapy activities.

In Ireland, regular audits of speech and language therapy practice in schools are not presently undertaken. From recent findings of a survey of practice conducted to inform a position paper on DLD (Irish Association of Speech and Language Therapists 2017) and a case study of practice in Irish schools commissioned by the NCSE (Rose *et al.* 2015), the most common model of service delivery to school-aged children with DLD in mainstream schools is *multidisciplinary*. For most children with DLD, this model is provided through primary care services and delivered at the child's health centre. Rose *et al.* (2015) described a consultative model of service delivery at one mainstream school, and a *class-based* model at one special school in their sample, but little detail was provided about exactly how these supports were delivered.

A very small proportion of Irish children with DLD receive regular speech and language therapy at a *language class*⁷ in school. These classes are attended only by children with severe language difficulties. An evaluation of such language classes was conducted by the NCSE over a decade ago (Department of Education and Skills 2005). Although the number of speech and language therapy sessions was greater than would be offered if the child accessed SLT from their local primary care team,⁸ the model of working described at this time was similar – viz., *outside of the classroom* and *multi-disciplinary*.

A pilot therapy service to schools is currently underway (as at 2019). From available data, the model is best described as a combination of *multi-disciplinary* and *consultative* working, with additional supports provided for school staff, including training and modelling of speech and language programmes. It is not clear the extent to which the project involves classroom-based working (Department of Education and Skills 2018).

There are marked limitations to the published data about speech and language therapy practice in schools. Many surveys have been conducted as a service audit, rather than for a research purpose, so may not fully capture the complexities of some models of working. Further limitations include small and non-representative samples and poor response rates, making it difficult to draw conclusions about practice. Nevertheless, findings demonstrate that, across many service contexts, inter-disciplinary and/or

⁷ Language classes typically have a reduced teacher : pupil ratio (1:12) and are attended by the child for a period of up to two years, usually between the ages of 7 to 9.

⁸ Children attending language classes are allocated more intensive SLT than would be receive from primary care services.

transdisciplinary models of service delivery for children with DLD are uncommon.

In summary, IPC has been a policy priority for many years, yet findings from surveys of SLT practice in schools suggest that it is rare in practice. This is of concern because if SLTs and teachers do not collaborate effectively, the child with DLD is unlikely to be able to participate and achieve in school.

Inter-professional collaboration

Inter-professional collaboration in health services research

Over thirty years ago, Leathard (1994) referred to the lack of consistency in the use of terminology and to a lack of conceptual clarity in relation to IPC in health services research (HSR) as a ‘quagmire,’ and that this lack of clarity was a barrier to developing a robust evidence base to guide practice. Since that time, several reviews of the HSR literature have been undertaken to synthesise the critical attributes of IPC and/or to develop a working definition of IPC (D'Amour *et al.* 2005; Martín-Rodríguez *et al.* 2005; Petri 2010). These studies have focused primarily on IPC between different healthcare professionals.

One of the earliest and most comprehensive reviews was conducted by D'Amour *et al.* (2005) who identified five key concepts related to collaboration: *sharing, partnership, inter-dependency, power and process*. Shared responsibility, shared decision-making and shared philosophy/values were identified as critical attributes of IPC. Partnership was also important for the collaborative relationship. A partnership infers an equal relationship, involving trust and respect. Inter-dependency was also identified in this review (D'Amour *et al.* 2005). This refers to the idea that where professionals from different backgrounds cannot fully meet the needs of the service-user alone, they are reliant on others to achieve best outcomes. It is this inter-dependency, according to D'Amour *et al.* (2005), which makes collective action possible. Power-sharing was found to be important to successful IPC, regardless of official titles or organisational hierarchies. Finally, IPC was described as an evolving process, rather than involving

discrete phases (D'Amour *et al.* 2005). A subsequent review by Petri (2010) identified similar themes, and described IPC as a joint decision-making process which is client-centred, and requires shared responsibility and equality.

Researchers in HSR have also been interested in identifying the barriers and facilitators of IPC. In a further review, San Martín-Rodríguez *et al.* (2005) identified several successful determinants of collaboration at a systemic, an organisational, and a socio-relational level. Factors identified at a systemic level included those related to social, professional and educational systems. Factors at an organisational level relate to shared organisational vision and philosophy, formal organisational structures that support IPC, and co-ordination of administrative processes. At a socio-relational level, common objectives, a shared vision, trust, and effective communication were identified as important to enable professionals to take on roles which may sit outside their traditional professional boundaries. Awareness among those involved of their differences, the extent to which IPC was focused on client needs and a willingness to commit to deliberate action, were identified as essential to effective collaboration (Martín-Rodríguez *et al.* 2005).

SLT/teacher collaboration

Much of the IPC research that is specific to SLTs/teachers has focused on identifying the barriers and facilitators to such working. In the UK, McCartney (1999) used a system analysis framework to explore barriers at a function, structure and process level between health services and mainstream schools. She identified differences in the goals and purpose

of speech and language therapy services and schools, as well fundamental differences in models of working (such as case-based versus whole classroom approaches) (McCartney 1999). McCartney (1999) also discussed differences in management and differences in the way language is conceptualised as being barriers to IPC at a structural level. The latter related to the different focus of practitioners; teachers being concerned with the functions of language and SLTs being concerned with the forms of language (McCartney 1999). Baxter *et al.* (2009) reported a lack of shared values and a lack of shared responsibility as barriers to effective IPC at their speech and language therapy service to mainstream schools. They also described barriers at a process level that related to communication systems between the speech and language therapy service and schools. Hartas (2004) identified similar barriers in special schools- specifically, differences in values and attitudes of SLTs and teachers. This is surprising, given that SLTs and teachers usually work closely together on a regular basis in this service context. Despite differences at a systemic and organisational level in how SLT services are organised, consistent barriers to IPC at a socio-relational level are evident across countries. In Australia, Glover *et al.* (2015) described a lack of shared understanding between SLTs and teachers about SLCN, as did researchers from the USA (Giangreco 2000; Brandel and Loeb 2011)

Few researchers have identified successful determinants of IPC to guide practice. McKean, Law *et al.* (2017) in their UK study identified shared values, responsibility and a philosophy as being essential to developing trusting and reciprocal relationships. These findings are

consistent with those of Giangreco (2000) from the USA who also identified norms of practice associated with effective IPC, such as those which involve negotiated, distributed and flexible action, autonomy and a strong sense of agency. These findings were consistent with earlier studies by Hartas (2004) and Martin (2008), who identified flexibility and agency on the part of practitioners as being important, so that practitioners can take the necessary risks to collaborate. An ability on the part of practitioners to be able to understand the perspectives of others has also been identified as important (Giangreco 2000; Prelock 2000). Interestingly, McKean, Law *et al.* (2017) describe a reduction in some systemic barriers to IPC in one local authority area in the UK, indicating some success in reducing barriers at this level.

In summary, effective IPC is a complex process and difficult to achieve. Barriers and facilitators identified for successful IPC across SLTs/teachers working in DLD are consistent across much of the HSR literature. At a socio-relational level, these include; a lack of shared understanding and values, and a lack of shared responsibility (Giangreco *et al.* 1991; McCartney 2002; Glover *et al.* 2015). Facilitators that have been identified include; a shared understanding between the practitioners, trust and respect, a sense of agency and an ability to understand the perspective of others (D'Amour *et al.* 2005; Petri 2010). The extent to which the interests of the service user are kept central has also been identified as important in facilitating successful IPC (Giangreco *et al.* 1991; San Martín-Rodríguez *et al.* 2005).

Although similarities are evident between findings of studies related to IPC between SLTs and teachers and those between healthcare

professionals, it is important to note that SLTs and teachers may be at a greater disadvantage when collaborating. Health professionals have a shared frame of reference, are likely to have had opportunities to learn together pre-qualification, and work together in the same setting on a daily basis (Hammick *et al.* 2007). This is not the case for SLTs and teachers. These practitioners come from different professional fields, have few (if any) pre-qualification opportunities to develop an understanding of these differences (Wilson *et al.* 2015) and do not typically work in the same setting, once qualified. Thus, it is likely that SLTs and teachers face greater challenges to develop shared goals and manage their differences when collaborating. However, no researchers to date have explored, in detail, the nature of their differences in perspectives and what, if any, implications that these differences might have for successful IPC between SLTs and teachers.

Stakeholder engagement

Involving stakeholders in health services research has long been considered important (Jagosh *et al.* 2012; Shippee *et al.* 2015). Doing so ensures that proposed service changes are (i) feasible and context-informed, and (ii) capable of delivering outcomes, which are meaningful to the service user (Esmail *et al.* 2015; Forsythe *et al.* 2018). Without involvement from stakeholders, health services cannot do what is intended- that is, to respond the needs of users (Evans *et al.* 2014). Involvement of multiple stakeholders is particularly important in research about speech and language therapy services to schools because achieving positive outcomes for the child with DLD relies almost entirely on the collaborative efforts of an SLT, a teacher and a parent. If proposed improvements do not acknowledge the priorities

and preferences of each, then changes are unlikely to be implemented (Forsythe *et al.* 2016).

Most researchers in speech and language therapy have focused on understanding parental experiences of accessing services rather than how such services might be improved. Findings suggest that parents are primarily concerned with the accessibility and timeliness of supports provided for their child (Lindsay and Dockrell 2004; Ruggero *et al.* 2012; Roulstone and Lindsay 2014; Marshall *et al.* 2017), with many describing difficulties in receiving help because of restrictive service criteria and/or long waiting lists.

In one study where researchers explored the views of parents about partnership working between health and education, authors reported a lack of shared responsibility and poorly coordinated supports (Band *et al.* 2002). A further well-documented parental concern is about supports which are insufficiently tailored to their child's needs (Roulstone *et al.* 2012). In terms of desired outcomes for their school-aged child with DLD, parents consistently emphasise the importance of *functional* (aka performance) outcomes - for example, improved language skills for enhancing participation and/or learning (Roulstone *et al.* 2012; Ruggero *et al.* 2012).

Researchers who have explored the views of SLTs about school services report dissatisfaction with a lack of resources/ time or caseload size as these are perceived to act as an obstacle to working collaboratively in schools (Glover *et al.* 2015)

Studies with children who have DLD have mainly focused on identifying their desired outcomes (Markham *et al.* 2009; Merrick and Roulstone 2011; Roulstone *et al.* 2012). These have included; having friends, being able to achieve in school and being able to work independently. These themes are consistent for children with a range of needs, attending a range of different school settings. Less is known about the priorities and preferences of children about how supports should be delivered in school, although Lyons and Roulstone (2018) have identified supportive relationships in school as being important to Irish children with DLD.

The views of teachers about speech and language services have received little research attention. In one study from the UK dissatisfaction with a particular consultative model of service delivery to schools was reported, due to a perceived lack of shared responsibility (Dockrell and Lindsay 2001). In another study, teachers reportedly held the view that they lack the necessary knowledge and skills to deliver SLT programmes effectively for children with SLCN in school (Marshall *et al.* 2002).

While understanding the experiences of stakeholders of current services is important, findings are of limited use in terms of improving such services. Understanding what stakeholders consider to be an ideal service and/or supports, on the other hand, may directly inform possible service improvements.

Research aims and objectives

The aims of the research were to characterise the diverse range of perspectives involved in the planning and delivery of collaborative supports in school for children with DLD, and to establish a shared understanding across stakeholder groups in order to develop an agreed set of *premises* to improve IPC between SLTs and teachers. Specific objectives were:

1. To establish whether concerns in the international literature regarding the identification and delivery of supports for children with speech, language and communication needs in school are relevant in the Irish context
2. To examine the literature, as one source of data, for evidence of a shared understanding between the fields of SLT and education about DLD
3. To gain an understanding of the views of key stakeholders (SLTs, teachers parents and children with DLD) about their desired speech and language therapy service and optimal supports in schools
4. To identify areas of agreement and disagreement to inform the development of premises for collaborative practice, by integrating the findings of 2 and 3,
5. To establish agreement across stakeholder groups about contentious topics to refine these premises
6. To propose a set of agreed premises to improve IPC between SLTs and teachers when supporting children with DLD in school

Design of the research

A mixed method, multi-phased design by Creswell *et al.* (2003) was employed. This design was particularly suited to the exploratory nature of the research, as it allowed sufficient flexibility for the findings from each phase of the study to inform the methodological choices of the next.

In mixed methods research, certain features of the study need to be made explicit to enhance transparency (Creswell and Clark 2007; Johnson *et al.* 2007). These include whether the study involves mixed methods within a single paradigm or from across different paradigms; when and how the findings will be integrated; and the orientation of the research (whether methodological choices are data-driven or whether an a priori framework is used in the analysis) (Johnson *et al.* 2007).

To the address the research questions of this study, both qualitative and quantitative methodologies were required. The study incorporates methods from positivist and constructivist paradigms. In terms of integrating the findings, this study was planned so that the findings from each phase informed the next, so it is a mixed methods sequential design (Creswell 2013). Finally, in terms of orientation, this study has a “bottom-up” approach where methodological choices are informed by the research questions (Teddlie and Tashakkori 2009)

The research approach taken is referred to as *pragmatism*. This approach is outcome-orientated as it allows practical solutions to be generated about social problems (Johnson and Onwuegbuzie 2006). A pragmatic approach places central importance on the research questions to

be answered, which then determines the methods used (Tashakkori and Teddlie 2003). Although pragmatism is not underpinned by explicit theories of knowledge, there is an assumption that useful knowledge can be produced through communication and the generation of shared principles for action. Underpinning this approach is the belief that findings can be generalised by analysing them for “transferability” to another situation. Glogowska (2011) argues that this approach is particularly useful in speech and language therapy given the multifaceted nature of research questions needing to be addressed in this healthcare context.

The study had three phases, as set out in Figure 3. These included a *formative* phase, a *development* phase and a *pilot* phase. The studies completed as part of this doctoral study relate to the first two phases. Proposed next steps (i.e. the pilot phase) are described in the concluding chapter of the thesis.

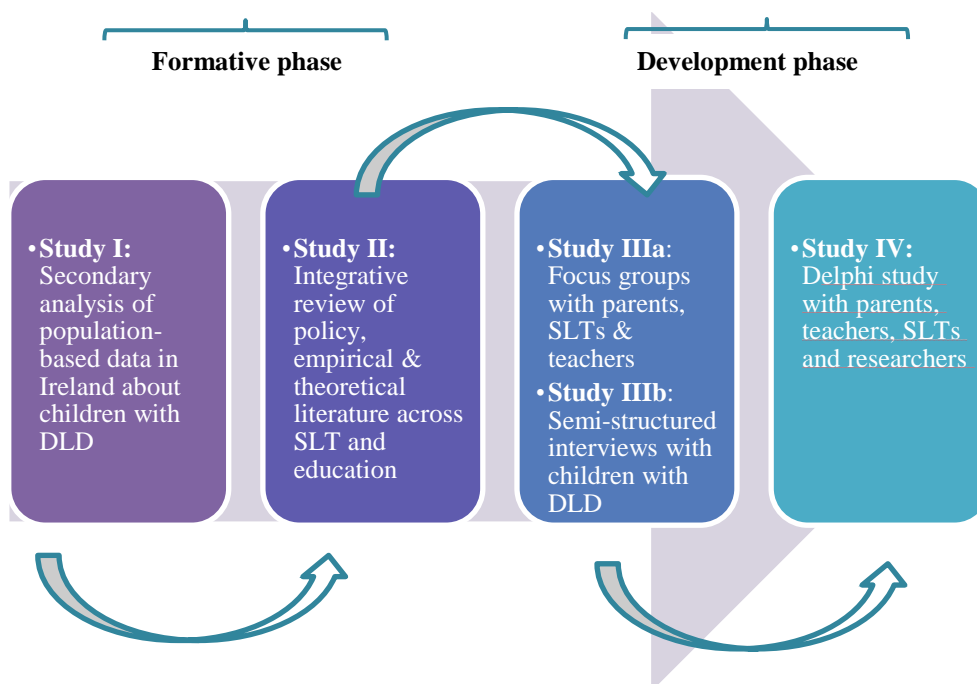


Figure 3. Overview of the phases of the doctoral research.

The formative phase comprises two studies; a secondary analysis of the *Growing up in Ireland* (GUI) data set (Economic and Social Research Institute 2014) involving a population-based sample of 13 year olds in Ireland, and an integrative review of the empirical and theoretical literature and policy papers across speech and language therapy and education about the needs of school-aged children with DLD. The development phase also comprises two studies; a qualitative study in which key stakeholders were engaged in the co-design of their optimal services and supports to school, and a Delphi study with parents, SLTs, teachers and researchers in which agreement was sought about contentious topics identified in earlier phases of the research.

Theoretical framework

D'amour's structuration model of IPC was used as a theoretical framework to guide the research (D'Amour *et al.* 2008). Informed by the findings of two comprehensive reviews of the literature about IPC (D'Amour *et al.* 2005; San Martín-Rodríguez *et al.* 2005) and subsequently tested and refined across a range of healthcare contexts (D'Amour *et al.* 2008), the model provides a theoretically-coherent, robustly- developed set of concepts to further explore IPC.

The model presented in Figure 4 includes concepts related to four interacting domains, two of which relate to IPC at a *socio-relational level*, and the others to factors at an *organisational level*.

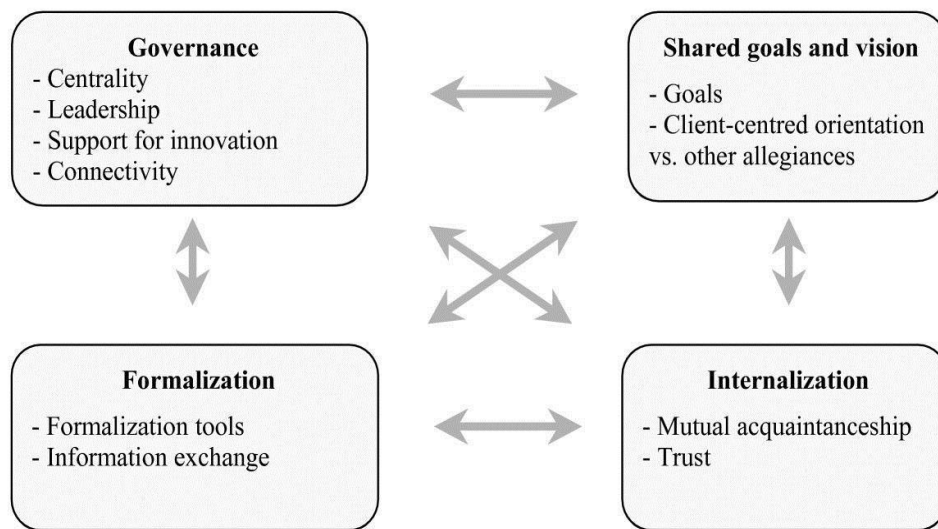


Figure 4. D'Amour's structuration model of inter-professional collaboration (D'Amour *et al.* 2008).

As the aim of this study was to gain an understanding of the perspectives of stakeholders to develop agreed premises, the socio-relational concepts were of primary relevance. These include *shared goals and vision* and *internalization*. D'Amour discusses the need for an agreed set of desired outcomes and direction to work towards and a client-centred approach as being important when collaborating. If differences in perspectives exist and these act as a barrier to developing shared goals, they need to be recognised and managed. Internalization refers to the degree to which those involved have an awareness of the differences between them. According to D'Amour *et al.* (2005), an awareness of professional differences is necessary to foster a sense of belonging and of trust between those involved. The model includes two organisational domains; *formalization*, - the degree to which procedures exist that facilitate IPC (thereby clarifying expectations and responsibilities) and *governance*- leadership that gives direction to, and support for, collaborative working.

Although these concepts did not directly guide this study, it was anticipated that they would have relevance, when parents and practitioners co-designed their ideal services.

As this study was concerned with IPC *across* the sectors of health and education and the model was developed for IPC *within* the health sector, the concepts behind the model were not used as a framework for analysis. Instead, the qualitative analyses in the study were conducted inductively, allowing any/all new concepts to be identified.

References

- Alloway, T.P. and Archibald, L. (2008) 'Working memory and learning in children with developmental coordination disorder and specific language impairment', *Journal of Learning Disabilities*, 41(3), 251-262.
- Alloway, T.P., Tewolde, F., Skipper, D. and Hjar, D. (2017) 'Can you spell dyslexia without SLI? Comparing the cognitive profiles of dyslexia and specific language impairment and their roles in learning', *Research in Developmental Disabilities*, 65, 97-102.
- Andreu, L., Sanz-Torrent, M., Guàrdia Olmos, J. and Macwhinney, B. (2011) 'Narrative comprehension and production in children with SLI: An eye movement study', *Clinical Linguistics and Phonetics*, 25(9), 767-783.
- Archibald, L.M.D. (2018) 'The reciprocal influences of working memory and linguistic knowledge on language performance: Considerations for the assessment of children with developmental language disorder', *Language, Speech, and Hearing Services in Schools*, 49(3), 424-433.
- Archibald, L.M.D. and Harder Griebeling, K. (2016) 'Rethinking the connection between working memory and language impairment', *International Journal of Language and Communication Disorders*, 51(3), 252-264.
- Archibald, L.M.D., Oram Cardy, J., Joanisse, M.F. and Ansari, D. (2013) 'Language, reading, and math learning profiles in an epidemiological sample of school age children', *PLoS ONE* [online], available: <http://dx.doi.org/10.1371/journal.pone.0077463>.
- Baddeley, A. (2003) 'Working memory and language: An overview', *Journal of Communication Disorders*, 36(3), 189-208.

- Band, S., Lindsay, G., Law, J., Soloff, N., Peacey, N., Gascoigne, M. and Radford, J. (2002) 'Are health and education talking to each other? Perceptions of parents of children with speech and language needs', *European Journal of Special Needs Education*, 17(3), 211-227.
- Baxter, S., Brookes, C., Bianchi, K., Rashid, K. and Hay, F. (2009) 'Speech and language therapists and teachers working together: Exploring the issues', *Child Language Teaching and Therapy*, 25(2), 215-234.
- Bedore, L.M. and Leonard, L.B. (2001) 'Grammatical morphology deficits in spanish-speaking children with specific language impairment', *Journal of Speech, Language, and Hearing Research*, 44(4), 905-924.
- Beitchman, J.H., Brownlie, E.B. and Bao, L. (2014) 'Age 31 mental health outcomes of childhood language and speech disorders', *Journal Of The American Academy of Child And Adolescent Psychiatry*, 53(10) [online], available: <http://dx.doi.org/10.1016/j.jaac.2014.07.006>.
- Benner, G.J., Nelson, J.R. and Epstein, M.H. (2002) 'Language skills of children with ebd: A literature review', *Journal of Emotional and Behavioral Disorders*, 10(1), 43-56.
- Bercow, J. (2008) *The Bercow report: a review of services for children and young people 0-19 with speech, language, and communication needs*, Nottingham: DCSF Publications, available: <https://lccn.loc.gov/2008431566> [accessed 6 Aug 2019].
- Bishop, D.V., Bright, P., James, C., Bishop, S.J. and van der Lely, H.K. (2000) 'Grammatical SLI: A distinct subtype of developmental language impairment?', *Applied Psycholinguistics*, 21(2), 159-181.
- Bishop, D.V. (2001) 'Genetic and environmental risks for specific language impairment in children', *Philosophical transactions of the Royal Society of London. Series B: Biological sciences*, 356(1407), 369-380.

- Bishop, D.V.M. (2010) 'Overlaps between autism and language impairment: Phenomimicry or shared etiology?', *Behavior Genetics*, 40(5), 618-629.
- Bishop, D.V. (2014) 'Ten questions about terminology for children with unexplained language problems', *International Journal of Language and Communication Disorders*, 49(4), 381-415.
- Bishop, D.V. and Leonard, L. (2014) *Speech and language impairments in children: Causes, characteristics, intervention and outcome*, Hove: Psychology Press.
- Bishop, D.V., Snowling, M.J., Thompson, P.A. and Greenhalgh, T. (2016) 'Catalise: A multinational and multidisciplinary delphi consensus study. Identifying language impairments in children', *PLoS ONE* [online], available: <https://dx.doi.org/10.1371/journal.pone.0168066>.
- Bishop, D. (2017) 'Why is it so hard to reach agreement on terminology? The case of developmental language disorder (DLD)', *International Journal of Language and Communication Disorders*, 52(6), 671-680.
- Bishop, D., Snowling, M.J., Thompson, P. and Greenhalgh, T. (2017) 'Phase 2 of catalise: A multinational and multidisciplinary delphi consensus study of problems with language development: Terminology', *Journal of Child Psychology and Psychiatry*, 58(10), 1068-1080.
- Bortolini, U., Caselli, M.C. and Leonard, L.B. (1997) 'Grammatical deficits in italian-speaking children with specific language impairment', *Journal of Speech, Language, and Hearing Research*, 40(4), 809-820.
- Botting, N. (2002) 'Narrative as a tool for the assessment of linguistic and pragmatic impairments', *Child Language Teaching and Therapy*, 18(1), 1-21.

- Botting, N. (2005) 'Non-verbal cognitive development and language impairment', *Journal of Child Psychology and Psychiatry*, 46(3), 317-326.
- Botting, N. and Conti-Ramsden, G. (2008) 'The role of language, social cognition, and social skill in the functional social outcomes of young adolescents with and without a history of SLI', *British Journal of Developmental Psychology*, 26(2), 281-300.
- Bowyer-Crane, C., Snowling, M., Duff, F., Fieldsend, E., Carroll, J., Miles, J., Götz, K. and Hulme, C. (2008) 'Improving early language and literacy skills: Differential effects of an oral language versus a phonology with reading intervention', *Journal of Child Psychology and Psychiatry*, 49(4), 422-32.
- Brandel, J. and Loeb, D. (2011) 'Program intensity and service delivery models in the schools: Slp survey results', *Language, Speech, and Hearing Services in Schools*, 42(4), 461-90.
- Connell, P.J. (1988) 'Induction, generalization, and deduction: Models for defining language generalization', *Language, Speech, and Hearing Services in Schools*, 19(3), 282-291.
- Conti-Ramsden, G. and Durkin, K. (2012a) 'Language development and assessment in the preschool period', *Neuropsychological Review*, 22(4), 384-401.
- Conti-Ramsden, G. and Durkin, K. (2012b) 'Postschool educational and employment experiences of young people with specific language impairment', *Language, Speech, and Hearing Services in Schools*, 43(4), 507-20.
- Cowan, R., Donlan, C., Newton, E.J. and Llyod, D. (2005) 'Number skills and knowledge in children with specific language impairment', *Journal of Educational Psychology*, 97(4), 732.
- Creswell, J.W. (2013) *Research design: Qualitative, quantitative, and mixed methods approaches*, Thousand Oaks, CA: Sage Publications.

- Creswell, J.W. and Clark, V.L.P. (2007) *'Designing and conducting mixed methods research'*, 2nd ed., Thousand Oaks, CA: Sage publications.
- Creswell, J.W., Plano Clark, V.L., Gutmann, M.L. and Hanson, W.E. (2003) 'Advanced mixed methods research designs' in Tashakkori, A. and Teddlie, C., eds., *Handbook on mixed methods in the behavioral and social sciences*, Thousand Oaks, CA: Sage Publications, 209-240.
- Cross, A.M., Joannis, M.F. and Archibald, L.M.D. (2019) 'Mathematical abilities in children with developmental language disorder', *Language, Speech, and Hearing Services in Schools*, 50(1), 150-163.
- D'Amour, D., Ferrada-Videla, M., Rodriguez, L.S.M. and Beaulieu, M.-D. (2005a) 'The conceptual basis for interprofessional collaboration: Core concepts and theoretical frameworks', *Journal of Interprofessional Care*, 19(1), 116-131.
- D'Amour, D., Goulet, L., Labadie, J.-F., Martín-Rodriguez, L.S. and Pineault, R. (2008) 'A model and typology of collaboration between professionals in healthcare organizations', *BMC Health Services Research* [online], available: <http://dx.doi.org/10.1186/1472-6963-8-188>.
- de Wit, E., van Dijk, P., Hanekamp, S., Visser-Bochane, M.I., Steenbergen, B., van der Schans, C.P. and Luinge, M.R. (2018) 'Same or different: The overlap between children with auditory processing disorders and children with other developmental disorders: A systematic review', *Ear and Hearing*, 39(1), 1-19.
- Department of Children and Youth Affairs (2013) *Better outcomes and brighter future*, Dublin: Stationary Office, available: https://www.dcy.gov.ie/documents/cypp_framework/betteroutcome_sbetterfuturereport.pdf [accessed 6 Aug 2019].
- Department of Education and Science (2007) *Special educational needs, a continuum of support*, Dublin: Stationary Office, available: <https://www.education.ie/en/schools-colleges/services/national->

educational-psychological-service-neps-/neps_special_needs_guidelines.pdf [accessed 21 May 2019].

Department of Education and Skills (2005) *An evaluation of special classes for pupils with specific speech and language disorder*, Dublin: Stationary Office, available: https://www.sess.ie/sites/default/files/ssld_report_2005.pdf [accessed 5 Aug 2019].

Department of Education and Skills (2017) *Guidelines for schools supporting children with special educational needs in mainstream schools*, Dublin: Stationary Office, available: <https://www.education.ie/en/the-department/announcements/guidelines-for-schools-supporting-children-with-special-educational-needs-in-mainstream-schools.html> [accessed June 2019].

Department of Education and Skills (2018) *Government launch new project to bring specialised therapists into schools and pre-schools* [press release], available: <https://www.education.ie/en/press-events/press-releases/2018-press-releases/pr18-05-14.html> [accessed 30 May 2019].

Disability Act 2005, No. 14/2005, Dublin: Stationary Office, available: <http://www.irishstatutebook.ie/eli/2005/act/14/enacted/en/html> [accessed 30 April 2019].

Dockrell, J. and Lindsay, G. (1998) 'The ways in which speech and language difficulties impact on children's access to the curriculum', *Child Language Teaching and Therapy*, 14(2), 117-133.

Dockrell, J. and Lindsay, G. (2001) 'Children with specific speech and language difficulties-the teachers' perspective', *Oxford Review of Education*, 27(3), 369-394.

Dockrell, J. and Howell, P. (2015) 'Identifying the challenges and opportunities to meet the needs of children with speech, language and communication difficulties', *British Journal of Special Education*, 42(4), 411-428.

- Domsch, C., Richels, C., Saldana, M., Coleman, C., Wimberly, C. and Maxwell, L. (2012) 'Narrative skill and syntactic complexity in school-age children with and without late language emergence', *International Journal of Language and Communication Disorders*, 47(2), 197-207.
- Donlan, C., Cowan, R., Newton, E.J. and Lloyd, D. (2007) 'The role of language in mathematical development: Evidence from children with specific language impairments', *Cognition*, 103(1), 23-33.
- Durkin, K. and Conti-Ramsden, G. (2010) 'Young people with specific language impairment: A review of social and emotional functioning in adolescence', *Child Language, Teaching and Therapy*, 26(2), 105-121.
- Eadie, P., Nguyen, C., Carlin, J., Bavin, E., Bretherton, L. and Reilly, S. (2014) 'Stability of language performance at 4 and 5 years: Measurement and participant variability', *International Journal of Language and Communication Disorders*, 49(2), 215-227.
- Ebbels, S. (2007) 'Teaching grammar to school-aged children with specific language impairment using shape coding', *Child Language Teaching and Therapy*, 23(1), 67-93.
- Ebert, K.D. and Kohnert, K. (2009) 'Non-linguistic cognitive treatment for primary language impairment', *Clinical Linguistics and Phonetics*, 23(9), 647-664.
- Economic and Social Research Institute. (2014) *Growing up in Ireland Child Cohort Wave 2 - 13 years*, [data set], V.1, Irish Social Science Data Archive, Central Statistic Office, Ireland, available: <http://www.ucd.ie/issda/data/guichild/guichildwave2> [accessed 7 Aug 2019].
- EPSEN Act 2004, No. 30/2004, Dublin: Stationary office, available: <http://www.irishstatutebook.ie/eli/2004/act/30/enacted/en/html> [accessed 3 May 2019].

- Esmail, L., Moore, E. and Rein, A. (2015) 'Evaluating patient and stakeholder engagement in research: Moving from theory to practice', *Journal of Comparative Effectiveness Research*, 4(2), 133-145.
- Evans, D., Coad, J., Cottrell, K., Dalrymple, J., Davies, R., Donald, C., Laterza, V., Long, A., Longley, A. and Moule, P. (2014) 'Public involvement in research: Assessing impact through a realist evaluation', *Health Services and Delivery Research*, 2(36), 1-128.
- Evans, J.L. (2001) 'An emergent account of language impairments in children with SLI: Implications for assessment and intervention', *Journal of Communication Disorders*, 34(1), 39-54.
- Evans, N. and Levinson, S.C. (2009) 'With diversity in mind: Freeing the language sciences from universal grammar', *Behavioral and Brain Sciences*, 32(5), 472-484.
- Fey, M.E., Richard, G.J., Geffner, D., Kamhi, A.G., Medwetsky, L., Paul, D., Ross-Swain, D., Wallach, G.P., Frymark, T. and Schooling, T. (2011) 'Auditory processing disorder and auditory/language interventions: An evidence-based systematic review', *Language, Speech, and Hearing Services in Schools*, 42(3), 246-264.
- Forsythe, L., Heckert, A., Margolis, M.K., Schrandt, S. and Frank, L. (2018) 'Methods and impact of engagement in research, from theory to practice and back again: Early findings from the patient-centered outcomes research institute', *Quality of Life Research*, 27(1), 17-31.
- Forsythe, L.P., Ellis, L.E., Edmundson, L., Sabharwal, R., Rein, A., Konopka, K. and Frank, L. (2016) 'Patient and stakeholder engagement in the pcori pilot projects: Description and lessons learned', *Journal of General Internal Medicine*, 31(1), 13-21.
- Fraser, J. and Conti-Ramsden, G. (2008) 'Contribution of phonological and broader language skills to literacy', *International Journal of Language and Communication Disorders*, 43(5), 552-569.

- Gathercole, S.E. (2006) 'Complexities and constraints in nonword repetition and word learning', *Applied Psycholinguistics*, 27(4), 599-613.
- Gerber, S., Brice, A., Capone, N., Fujiki, M. and Timler, G. (2012) 'Language use in social interactions of school-age children with language impairments: An evidence-based systematic review of treatment', *Language, Speech, and Hearing Services in Schools*, 43(2), 235-249.
- Giangreco, M.F. (2000) 'Clinical forum. Related services research for students with low-incidence disabilities: Implications for speech-language pathologists in inclusive classrooms', *Language, Speech, and Hearing Services in Schools*, 31(3), 230-307.
- Giangreco, M.F., Edelman, S. and Dennis, R. (1991) 'Common professional practices that interfere with the integrated delivery of related services', *Remedial and Special Education*, 12(2), 16-24.
- Gillam, R.B., Loeb, D.F., Hoffman, L.M., Bohman, T., Champlin, C.A., Thibodeau, L., Widen, J., Brandel, J. and Friel-Patti, S. (2008) 'The efficacy of fast forward language intervention in school-age children with language impairment: A randomized controlled trial', *Journal of Speech, Language and Hearing Research*, 51(1), 97-119.
- Girard, LC., Pingault, JB., Doyle, O., Falissard, B. and Tremblay, R.E. (2016) 'Developmental associations between conduct problems and expressive language in early childhood: A population-based study', *Journal of Abnormal Child Psychology*, 44(6), 1033-1043.
- Glogowska, M. (2011) 'Paradigms, pragmatism and possibilities: Mixed-methods research in speech and language therapy', *International Journal of Language and Communication Disorders*, 46(3), 251-260.
- Glover, A., McCormack, J. and Smith-Tamaray, M. (2015) 'Collaboration between teachers and speech and language therapists: Services for

primary school children with speech, language and communication needs', *Child Language Teaching and Therapy*, 31(3), 363-382.

Gregory, J. and Bryan, K. (2011) 'Speech and language therapy intervention with a group of persistent and prolific young offenders in a non-custodial setting with previously undiagnosed speech, language and communication difficulties', *International Journal of Language and Communication Disorders*, 46(2), 202-215.

Hammick, M., Freeth, D., Koppel, I., Reeves, S. and Barr, H. (2007) 'A best evidence systematic review of interprofessional education: Beme guide no. 9', *Medical Teacher*, 29(8), 735-751.

Hartas, D. (2004) 'Teacher and speech-language therapist collaboration: Being equal and achieving a common goal?', *Child Language Teaching and Therapy*, 20(1), 33-54.

Health Service Executive (2012) *Report of the national reference group on multidisciplinary disability services for children aged 5-18*, Dublin: Health Service Executive, available: <http://hdl.handle.net/10147/128278> [accessed 1 May 2019].

Health Service Executive (2013) *Framework for collaborative working between health and education professionals*, Dublin: Health Service Executive, available: <https://www.hse.ie/eng/services/list/4/disability/progressing-disability/education-and-health-framework-for-collaborative-working.pdf> [accessed 1 May 2019].

Hughes, N., Chitsabesan, P., Bryan, K., Borschmann, R., Swain, N., Lennox, C. and Shaw, J. (2017) 'Language impairment and comorbid vulnerabilities among young people in custody', *Journal of Child Psychology and Psychiatry*, 58(10), 1106-1113.

Irish Association of Speech and Language Therapists (2017) *Supporting children with developmental language disorder in ireland: Position paper and guidance document*, Dublin: IASLT, available: <http://www.iaslt.ie/documents/public-information/childhood%20>

[speech%20and%20language/dld%20position%20paper%20final%2023may2017.pdf](#) [accessed 29 May 2019].

Irish Association of Speech and Language Therapists (2016) *Speech and language therapy scope of practice*, Dublin: IASLT, available: [https://www.iaslt.ie/documents/public-information/iaslt/code%20of%20professional%20conduct%20and%20ethics%202015%20final.pdf](#) [accessed 22 April 2019].

Irish National Teachers' Organization (2001) *Let the children speak*, Dublin: INTO, available: [https://www.into.ie/roi/publications/letchildrenspeak.pdf](#) [accessed 3 Jan 2019].

Jagosh, J., Macaulay, A.C., Pluye, P., Salsberg, J.O.N., Bush, P.L., Henderson, J.I.M., Sirett, E., Wong, G., Cargo, M., Herbert, C.P., Seifer, S.D., Green, L.W. and Greenhalgh, T. (2012) 'Uncovering the benefits of participatory research: Implications of a realist review for health research and practice', *Milbank Quarterly*, 90(2), 311-346.

Joffe, V.L., Nippold, M.A. and Oetting, J. (2012) 'Progress in understanding adolescent language disorders', *Language, Speech and Hearing Services in Schools*, 43(4), 438-444.

Johnson, C.J., Beitchman, J.H. and Brownlie, E.B. (2010) 'Twenty-year follow-up of children with and without speech-language impairments: Family, educational, occupational, and quality of life outcomes', *American Journal of Speech-Language Pathology*, 19(1), 51-65.

Johnson, R.B., Onwuegbuzie, A.J. and Turner, L.A. (2007) 'Toward a definition of mixed methods research', *Journal of Mixed Methods Research*, 1(2), 112-133.

Kelso, K., Fletcher, J. and Lee, P. (2007) 'Reading comprehension in children with specific language impairment: An examination of two subgroups', *International Journal of Language and Communication Disorders*, 42(1), 39-57.

- Kuusisto, M.A., Nieminen, P.E., Helminen, M.T. and Kleemola, L. (2017) 'Executive and intellectual functioning in school-aged children with specific language impairment', *International Journal of Language and Communication Disorders*, 52(2), 127-136.
- Lancaster, H.S. and Camarata, S. (2019) 'Reconceptualizing developmental language disorder as a spectrum disorder: Issues and evidence', *International Journal of Language and Communication Disorders*, 54(1), 79-94.
- Law, J., Boyle, J., Harris, F., Harkness, A. and Nye, C. (2000) 'Prevalence and natural history of primary speech and language delay: Findings from a systematic review of the literature', *International Journal of Language and Communication Disorders*, 35(2), 165-188.
- Law, J., Rush, R., Schoon, I. and Parsons, S. (2009) 'Modeling developmental language difficulties from school entry into adulthood: Literacy, mental health, and employment outcomes', *Journal of Speech, Language, and Hearing Research*, 52(6), 1401-1416.
- Law, J., Rush, R., Clegg, J., Peters, T. and Roulstone, S. (2015) 'The role of pragmatics in mediating the relationship between social disadvantage and adolescent behavior', *Journal of Developmental and Behavioral Pediatrics*, 36(5), 389-398.
- Leathard, A. (1994) *Going interprofessional: Working together for health and welfare*, London: Routledge.
- Leonard, H.C. and Hill, E.L. (2014) 'The impact of motor development on typical and atypical social cognition and language: A systematic review', *Child and Adolescent Mental Health*, 19(3), 163-170.
- Leonard, L.B. (2009) 'Some reflections on the study of children with specific language impairment', *Child Language Teaching and Therapy*, 25(2), 169-171.

- Leonard, L.B. (2014) 'Specific language impairment across languages', *Child Development Perspectives*, 8(1), 1-5.
- Leonard, L.B., Fey, M.E., Deevy, P. and Bredin-Oja, S.L. (2015) 'Input sources of third person singular-s inconsistency in children with and without specific language impairment', *Journal of Child Language*, 42(4), 786-820.
- Leonard, L.B. (2017) *Specific language impairment*, *Oxford research encyclopedia of psychology*, available: <https://oxfordre.com/psychology/view/10.1093/acrefore/9780190236557.001.0001/acrefore-9780190236557-e-64> [accessed 2 Feb 2018].
- Levy, H. and Friedmann, N. (2009) 'Treatment of syntactic movement in syntactic SLI: A case study', *First Language*, 29(1), 15-49.
- Lindsay, G. and Dockrell, J. (2004) 'Whose job is it? Parents' concerns about the needs of their children with language problems', *Journal of Special Education*, 37(4), 225-235.
- Lindsay, G., Dockrell, J., Desforges, M., Law, J. and Peacey, N. (2010) 'Meeting the needs of children and young people with speech, language and communication difficulties', *International Journal of Language and Communication Disorders*, 45(4), 448-460.
- Lucas, R. and Frazier Norbury, C. (2015) 'Making inferences from text: It's vocabulary that matters', *Journal of Speech, Language and Hearing Research*, 58(4), 1224-1232.
- Lyons, R. and Roulstone, S. (2018) 'Well-being and resilience in children with speech and language disorders', *Journal of speech, language, and hearing research*, 61(2), 324-344.
- MacWhinney, B. (2004) 'A multiple process solution to the logical problem of language acquisition', *Journal of Child Language*, 31(4), 883-914.
- MacWhinney, B. (2006) 'Emergentism—use often and with care', *Applied Linguistics*, 27(4), 729-740.

- Markham, C., Laar, D., Gibbard, D. and Dean, T. (2009) 'Children with speech, language and communication needs: Their perceptions of their quality of life', *International Journal of Language and Communication Disorders*, 44(5):748-68.
- Marshall, J., Ralph, S. and Palmer, S. (2002) 'I wasn't trained to work with them: Mainstream teachers' attitudes to children with speech and language difficulties', *International Journal of Inclusive Education*, 6(3), 199-215.
- Marshall, J., Harding, S. and Roulstone, S. (2017) 'Language development, delay and intervention—the views of parents from communities that speech and language therapy managers in England consider to be under-served', *International Journal of Language and Communication Disorders*, 52(4), 489-500.
- Martin, D. (2008) 'A new paradigm to inform inter-professional learning for integrating speech and language provision into secondary schools: A socio-cultural activity theory approach', *Child Language Teaching and Therapy*, 24(2), 173-192.
- McCartney, E. (1999) 'Barriers to collaboration: An analysis of systemic barriers to collaboration between teachers and speech and language therapists', *International Journal of Language and Communication Disorders*, 34(4), 431-440.
- McCartney, E. (2002) 'Cross-sector working: Speech and language therapists in education', *Journal of Management in Medicine*, 16(1), 67-77.
- McGregor, K.K., Newman, R.M., Reilly, R.M. and Capone, N.C. (2002) 'Semantic representation and naming in children with specific language impairment', *Journal of Speech, Language, and Hearing research*, 45(5):998-1014.
- McKean, C., Letts, C. and Howard, D. (2014) 'Triggering word learning in children with language impairment: The effect of phonotactic

probability and neighbourhood density', *Journal of Child Language*, 41(6), 1224-1248.

McKean, C., Law, J., Laing, K., Cockerill, M., Allon-Smith, J., McCartney, E. and Forbes, J. (2017) 'A qualitative case study in the social capital of co-professional collaborative co-practice for children with speech, language and communication needs', *International Journal of Language and Communication Disorders*, 52(4), 514-527.

McKean, C., Reilly, S., Bavin, E.L., Bretherton, L., Cini, E., Conway, L., Cook, F., Eadie, P., Prior, M. and Wake, M. (2017) 'Language outcomes at 7 years: Early predictors and co-occurring difficulties', *Pediatrics* [online], available: [http://dx. doi: 10.1542/peds.2016-1684](http://dx.doi.org/10.1542/peds.2016-1684).

McKean, C., Wraith, D., Eadie, P., Cook, F., Mensah, F. and Reilly, S. (2017) 'Subgroups in language trajectories from 4 to 11 years: The nature and predictors of stable, improving and decreasing language trajectory groups', *Journal of Child Psychology and Psychiatry*, 58(10), 1081-1091.

Merrick, R. and Roulstone, S. (2011) 'Children's views of communication and speech-language pathology', *International Journal of Speech-Language Pathology*, 13(4), 281-290.

Nippold, M.A. (1993) 'Developmental markers in adolescent language: Syntax, semantics, and pragmatics', *Language, Speech, and Hearing Services in Schools*, 24(1), 21-28.

Nippold, M.A. (2016) 'Language disorders in adolescents: Current needs and future directions', *Seminars in Speech and Language*, 37(4), 274-279.

Norbury, C.F. (2014) 'Language impairment: Where do we draw the line?', *International Journal of Language and Communication Disorders*, 49(4), 445-446.

- Norbury, C.F., Gooch, D., Wray, C., Baird, G., Charman, T., Simonoff, E., Vamvakas, G. and Pickles, A. (2016) 'The impact of nonverbal ability on prevalence and clinical presentation of language disorder: Evidence from a population study', *Journal of Child Psychology and Psychiatry*, 57(11), 1247-1257.
- Oetting, J.B., Hadley, P.A. and Schwartz, R. (2009) 'Morphosyntax in child language disorders', *Handbook of Child Language Disorders*, 341-364.
- Palikara, O., Lindsay, G. and Dockrell, J.E. (2009) 'Voices of young people with a history of specific language impairment (SLI) in the first year of post-16 education', *International Journal of Language and Communication Disorders*, 44(1), 56-78.
- Pennington, B.F. and Bishop, D.V. (2009) 'Relations among speech, language, and reading disorders', *Annual Review of Psychology*, 60, 283-306.
- Petri, L. (2010) 'Concept analysis of interdisciplinary collaboration', *Nursing Forum*, 45(2), 73-82.
- Pinker, S. and Jackendoff, R. (2005) 'The faculty of language: What's special about it?', *Cognition*, 95(2), 201-236.
- Prelock, P.A. (2000) 'Clinical forum: Prologue. Multiple perspectives for determining the roles of speech-language pathologists in inclusionary classrooms', *Language, Speech and Hearing Services in Schools*, 31(3), 213-307.
- Reilly, S., Bishop, D.V. and Tomblin, B. (2014a) 'Terminological debate over language impairment in children: Forward movement and sticking points', *International Journal of Language and Communication Disorders*, 49(4), 452-62.
- Reilly, S., Tomblin, B., Law, J., McKean, C., Mensah, F.K., Morgan, A., Goldfeld, S., Nicholson, J.M. and Wake, M. (2014b) 'Specific

- language impairment: A convenient label for whom?', *International Journal of Language and Communication Disorders*, 49(4), 416-51.
- Rice, M.L. and Wexler, K. (1996) 'Toward tense as a clinical marker of specific language impairment in english-speaking children', *Journal of Speech, Language, and Hearing Research*, 39(6), 1239-1257.
- Rice, M.L., Wexler, K. and Hershberger, S. (1998) 'Tense over time: The longitudinal course of tense acquisition in children with specific language impairment', *Journal of Speech, Language, and Hearing Research*, 41(6), 1412-1431.
- Rice, M.L. (2016) 'Specific language impairment, nonverbal IQ, attention-deficit/hyperactivity disorder, autism spectrum disorder, cochlear implants, bilingualism, and dialectal variants: Defining the boundaries, clarifying clinical conditions, and sorting out causes', *Journal of Speech, Language and Hearing Research*, 59(1), 122-132.
- Rix, J., Sheehy, K., Fletcher- Camppbell, F., Crisp, M. and Harper, A. (2013) *Continuum of education provision for children with special educational needs; a review of international policies and practices*, available: http://www.ncse.ie/uploads/1/Continuum_of_Provision_website_summary.pdf [accessed 3 April 2019].
- Rose, R., Shevlin, M., Winter, E. and O'Raw, P. (2015b) *Project IRIS— inclusive research in Irish schools, a longitudinal study of the experiences of and outcomes for pupils with Special Educational Needs (SEN) in Irish Schools*, available: <https://pdst.ie/sites/default/files/NCSE-IRIS-Report-No20.pdf> [accessed 4 May 2019].
- Roulstone, S., Coad, J., Ayre, A., Hambly, H. and Lindsay, G. (2012) *The preferred outcomes of children with speech, language and communication needs and their parents*, London: Department of Education, available: <https://www.gov.uk/government/publications>

/the-preferred-outcomes-of-children-with-speech-language-and-communication-needs-and-their-parents [accessed 2 May 2019].

Roulstone, S. and Lindsay, G. (2014) *The perspectives of children and young people who have speech, language and communication needs, and their parents*, London: Department of Education, available: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/219633/DFE-RR247-BCRP7.pdf [accessed 2 May 2019].

Royal College of Speech and Language Therapists (2018) *Bercow- ten years on*, available: <https://www.bercow10yearson.com/> [accessed 4 Aug 2019].

Rudolph, J.M. (2017) 'Case history risk factors for specific language impairment: A systematic review and meta-analysis', *American Journal of Speech- Language Pathology*, 26(3), 991-1010.

Ruggero, L., McCabe, P., Ballard, K.J. and Munro, N. (2012) 'Paediatric speech-language pathology service delivery: An exploratory survey of australian parents', *International Journal of Speech- Language Pathology*, 14(4), 338-350.

San Martín-Rodríguez, L., Beaulieu, M.-D., D'Amour, D. and Ferrada-Videla, M. (2005) 'The determinants of successful collaboration: A review of theoretical and empirical studies', *Journal of Interprofessional Care*, 19(1), 132-147.

Schaeffer, J. (2003) Pragmatics and SLI in Levy, Y. and Schaeffer, J., eds., *Language competence across populations: Towards a definition of specific language impairment*, Hillsdale, NJ: Lawrence Erlbaum Associates, 135-150.

Schwartz, R.G. (2010) *Handbook of Child Language Disorders*, Abingdon: Routledge.

Shippee, N.D., Domecq Garces, J.P., Prutsky Lopez, G.J., Wang, Z., Elraiyah, T.A., Nabhan, M., Brito, J.P., Boehmer, K., Hasan, R. and

- Firwana, B. (2015) 'Patient and service user engagement in research: A systematic review and synthesized framework', *Health Expectations*, 18(5), 1151-1166.
- Snow, P.C. (2016) 'Elizabeth usher memorial lecture: Language is literacy is language-positioning speech-language pathology in education policy, practice, paradigms and polemics', *International Journal of Speech-Language Pathology*, 18(3), 216-228.
- Snowling, M.J. and Hulme, C. (2006) 'Language skills, learning to read and reading intervention', *London Review of Education*, 4(1), 63-76.
- Storkel, H.L. (2011) 'Differentiating word learning processes may yield new insights-a commentary on Stoel-Gammon's "relationships between lexical and phonological development in young children"', *Journal of Child Language*, 38(1), 51-55.
- Suleman, S., McFarlane, L.-A., Pollock, K., Schneider, P., Leroy, C. and Skoczylas, M. (2014) 'Collaboration: More than 'working together': An exploratory study to determine effect of interprofessional education on awareness and application of models of specialized service delivery by student speech-language pathologists and teachers', *Canadian Journal of Speech-Language Pathology and Audiology*, 37(4), 298-307.
- Tallal, P., Merzenich, M., Miller, S. and Jenkins, W. (1998) 'Language learning impairment: Integrating research and remediation', *Scandinavian Journal of Psychology*, 39(3), 197-199.
- Teddlie, C. and Tashakkori, A. (2009) *Foundations of mixed methods research: Integrating quantitative and qualitative approaches in the social and behavioral sciences*, Thousand Oaks, CA: Sage Publications.
- Tomas, E. and Vissers, C. (2019) 'Behind the scenes of developmental language disorder: Time to call neuropsychology back on stage',

Frontiers in Human Neuroscience [online], available: <http://dx.doi.org/10.3389/fnhum.2018.00517>.

Tomblin, J.B., Smith, E. and Zhang, X. (1997) 'Epidemiology of specific language impairment: Prenatal and perinatal risk factors', *Journal of Communication Disorders*, 30(4), 325-344.

Ukoumunne, O.C., Wake, M., Carlin, J., Bavin, E.L., Lum, J., Skeat, J., Williams, J., Conway, L., Cini, E. and Reilly, S. (2012) 'Profiles of language development in pre-school children: A longitudinal latent class analysis of data from the early language in victoria study', *Child: Care, Health and Development*, 38(3), 341-349.

United Nations Ministry of Educational, Scientific and Cultural Organization (1994) *The UNESCO salamanca statement*, Paris:UNESCO, available: http://www.unesco.org/education/pdf/SALAMA_E.PDF [accessed 2 May 2019].

van der Lely, H.K. (2005) 'Domain-specific cognitive systems: Insight from grammatical-SLI', *Trends in Cognitive Sciences*, 9(2), 53-59.

van der Lely, H.K. and Battell, J. (2003) 'Wh-movement in children with grammatical SLI: A test of the RDDR hypothesis', *Language*, 79(1), 153-181.

van der Lely, H.K., Rosen, S. and McClelland, A. (1998) 'Evidence for a grammar-specific deficit in children', *Current Biology*, 8(23), 1253-1258.

Wetherell, D., Botting, N. and Conti - Ramsden, G. (2007) 'Narrative in adolescent specific language impairment (SLI): A comparison with peers across two different narrative genres', *International Journal of Language and Communication Disorders*, 42(5), 583-605.

Wilson, L., McNeill, B. and Gillon, G.T. (2015) 'The knowledge and perceptions of prospective teachers and speech language therapists

in collaborative language and literacy instruction', *Child Language Teaching and Therapy*, 31(3), 347-362.

World Health Organization (2010) *Framework for action on interprofessional education and collaborative practice*, Geneva: WHO Press, available: https://www.who.int/hrh/resources/framework_action/en/ [accessed 22 Nov 2018].

World Health Organization (2011) *World report on disability*, Geneva: WHO Press, available: http://www.who.int/disabilities/world_report/2011/en/index.html [accessed 22 Nov 2018].

Chapter 3

Paper I

Gallagher, A. L., Galvin, R., Robinson, K., Murphy, CA., Conway, P.F. and Perry, A. 'The characteristics, life circumstances and self-concept of 13 year olds with and without disabilities in Ireland: A secondary analysis of the Growing Up in Ireland (GUI) study.' Submitted to PLoS ONE (under review)

This research article is the first of six manuscripts presented in Chapters 3-6 of this doctoral thesis. In the paper, a secondary analysis of a population-based study of children with disabilities is reported. The paper was conceived and written by the PhD candidate with guidance from Dr. Rose Galvin, Dr. Katie Robinson, Dr. Carol-Anne Murphy, Professor Paul Conway and Professor Alison Perry.

One aim of the study was to ascertain how well speech, language and communication needs are identified amongst school-aged children in Ireland when compared with other developmental disabilities. A second aim was to describe the proportion of children with SLCN in Ireland receiving support in school. As self-concept is considered an important predictor of school success, a third aim was to explore the self-concept of children with SLCN compared with children with other disabilities. A large population-based data set was used to conduct this study.

Specific research questions to be addressed were:

- (i) How well are the needs of children with SLCN identified currently in Ireland compared with children who have other disability types?

- (ii) What proportion of Irish children with SLCN currently receives SLT supports in school?
- (iii) How satisfied are parents about current supports for their school-aged child with SLCN?
- (iv) Do Irish children with SLCN have lower self-concept scores than children with other developmental disabilities and/ or their typically-developing peers?

The characteristics, life circumstances and self-concept of 13 year olds with and without disabilities in Ireland: A secondary analysis of the Growing Up in Ireland (GUI) study

Abstract

Background

Population-based studies provide important data to inform policy and service planning for vulnerable children in society. The aim of this study is to characterise social and educational circumstances and self-concept among a nationally representative sample of 13 year olds with developmental disabilities in Ireland.

Methods

A cross-sectional, secondary analysis of data collected from the Growing Up in Ireland (GUI) study was conducted. Descriptive statistics were used to calculate the reported prevalence of disabilities as reported by parents. Differences across the groups (those with and without disabilities) were analysed in relation to gender, socio-economic and school factors. Special education supports received in school was described. The association between low self-concept (as measured by the Piers Harris Self-Concept Scales 2) and disability type was examined by use of multi-level logistic regression.

Results

Seventeen percent (17.36%) of the sample was reported to have a diagnosis of one or more developmental disabilities. Those with a disability were more likely to live in poorer households, have poorer health status, to

experience more episodes of bullying at school, and to have more negative views of school ($p < 0.05$) than their typically-developing peers.

Forty nine percent of children with developmental disabilities were not receiving supports in school as reported by parents. Discrepancies in the nature of supports received were identified across disability types. Adjusting for individual and school level factors, a disability diagnosis was associated with an increased risk of low self-concept on three of five self-concept domains. Further associations were identified which differed across disability type.

Conclusions

The findings show that 13 year olds with a disability in Ireland have complex social and educational needs. Findings also suggest significant levels of unmet educational need across this age group. Apparent inequities in access to supports in school require further investigation. Reliable measures to provide robust prevalence figures about childhood disabilities in Ireland are needed.

Keywords: developmental disability, cross-sectional analysis, self-concept, autistic spectrum disorder, speech, language and communication needs, physical disability, specific learning difficulties.

Introduction

Adolescence is a particularly turbulent time for most children but particularly for those with a disability. This is due to an increased risk of mental health problems, bullying and school refusal amongst this group (Boyd *et al.* 2006; Zeedyk *et al.* 2014; Rose *et al.* 2015; Blake *et al.* 2016). Population-based studies provide important data for understanding both the individual characteristics of those with disabilities and the circumstances in which they live. Such studies are useful for informing policy and service planning, as well as for identifying gaps in research that may lead to enhanced health and education outcomes for vulnerable groups (Emerson and Baines 2011; Emerson 2012). In contrast to other countries, Ireland has only recently invested in a population-based study of children (Murray *et al.* 2011) and thus there are relatively few published studies about the lives of those with disabilities. The aim of this study was to describe the characteristics, life circumstances and self-concept of Irish children who have been diagnosed with a developmental disability.

Findings from population-based studies elsewhere highlight the importance of considering the broader context such as social or family circumstances, in addition to individual factors, in understanding the needs of such vulnerable groups. Children with disabilities are significantly more likely to live in social disadvantage and have chronic health problems as well as the health status of parents of children with disabilities being more likely to be poor (Blackburn *et al.* 2010; Emerson 2012; World Health Organization 2012; World Health Organization 2014; Spencer and Blackburn 2015). Further, if one child in the family has a diagnosis of a

disability, there is an increased chance of them having siblings with a disability (Fujiura and Yamaki 2000; Brault 2012; Spencer *et al.* 2013; Spencer and Blackburn 2015).

From the limited number of studies conducted about children in Irish schools, findings suggest that the nature of the school influences the likelihood of being identified as having a disability and in receiving supports. (McCoy *et al.* 2012) identified that if a child attends a school which is designated as serving a population of socio-economic disadvantage, that child is more likely to be identified and to receive supports for their needs (McCoy *et al.* 2012). The gender mix of the school has also been shown to influence educational outcomes (McCoy *et al.* 2012). Understanding protective and risk factors in relation to the social, family and school context can inform service needs and, by extension, the quality of life for this population in Ireland.

An individual's self-concept is concerned with how they view themselves (Chen *et al.* 2012). It is a multi-dimensional construct involving an individual's perception of their skills across a range of different domains, or areas of competence (Marsh 2011). In school-aged children these include: academic/ educational status - how well an individual perceives themselves to be performing compared with their peers, in terms of school achievement and social acceptance, or how well an individual feels they are accepted by, or popular among, their peers (Byrne 1996). Self-concept is a useful measure for informing service planning and policy for two reasons. First, a positive self-concept is strongly associated with emotional well-being,

academic achievement, maintaining safe and healthy relationships acquiring effective coping skills, and it is central to an individual's adaptive functioning (Huang 2011; Green *et al.* 2012; Hattie 2014). Therefore, it may be that identifying children at risk of poor self-concept and putting supports in place to promote a more positive self-concept may improve their educational outcomes. Second, self-concept develops in response to an individual's environment (Chen *et al.* 2012). Given that increasing numbers of children with disabilities are being educated in mainstream classrooms in Ireland (Rose *et al.* 2015), self-concept may be a useful indicator of how inclusive these classrooms are.

Findings from studies of self-concept amongst children with disabilities are not conclusive. A New Zealand national survey of children with dyspraxia showed significantly lower global self-concept scores (in both academic and social self-concept domains) compared to their typically developing (TD) peers (Eggleston *et al.* 2012), whereas (Poole *et al.* 2018) reported an association between motor impairments and self-concept only for children with a low birth weight. For children who have specific learning difficulties (SpLD) - dyslexia and/or dyscalculia, (Zelege 2004) reported significantly lower academic self-concept than in their TD peers, but these findings were not consistent in a subsequent review conducted by (Burden 2008). For children with emotional behavioural disorders (EBD) the results of studies of self-concept are also mixed. (Gage and Lierheimer 2012) reported high self-concept scores in a clinical sample of children with EBD whereas (Wei and Marder 2012) reported low self-concept scores in their population-based study. It may be that clinical samples include children

with greater levels of need, which is then reflected in lower scores on self-concept. Comparatively few studies have examined the association between the diagnosis and self-concept of children with Autistic Spectrum Disorder (ASD) and /or those with Speech, Language and Communication Needs (SLCN). Lindsay and Dockrell (2000) explored self-esteem in a clinical sample of children with developmental language disorders (a subset of SLCN) over two time points, and reported they had no difficulties. By contrast, Conti-Ramsden and Botting (2008) reported poor self- concept in a sample of individuals with a history of SLCN. In a population-based sample from the USA, Wei and Marder (2012) identified children with ASD as having lower self-concept related to social domains but not related to academic achievement, compared with TD peers. A more consistent picture emerges for children with learning disabilities (LD). Earlier researchers suggested that children with such needs were at increased risk of low self-concept. However, from a more recent systematic review of 28 population-based studies, which included reliable multi-dimensional measures of self-concept, it was concluded that there was evidence of significantly lower self-concept scores for academic status only (Zelege 2004).

Like many other countries, children with a disability in Ireland are considered to have special educational needs (SEN) and are legally entitled to receive additional supports in school in order to meet these needs (Education for Persons with Special Educational Needs Act 2004; Disability Act 2005). This support may be delivered by a range of education and health professionals, such as a resource/learning support teacher, an educational psychologist, a special needs assistant (SNA), a speech and

language therapist (SLT), an occupational therapist (OT) and/or a visiting teacher with additional skills and knowledge about children with visual/hearing impairments.

In the Irish education system, a resource/learning support teacher is responsible for delivering interventions for any child with SEN across the school. Unlike learning support assistants in the UK, and para-professionals in the USA, SNAs are not responsible for meeting the *learning* needs of the child with SEN in school, rather, their *care* needs (Department of Education and Skills 2017). Visiting teachers in Ireland are responsible for a caseload of children with visual and/or hearing impairment in a particular geographical region, until the end of their compulsory education. Children in second-level education in Ireland who are considered to have emotional and/or behavioural difficulties, such as poor social skills, low self-esteem or difficulties in maintaining friendships and concentration, can access additional supports as part of a national behaviour programme. The SEN supports received from these professionals by children in the first year of second-level education in Ireland has not been documented. This year of schooling is critical in terms of identifying and planning how the child's SEN will be met over the course of secondary school.

In summary, population-based samples may provide important data to guide policy and service planning for vulnerable groups. Findings from studies elsewhere have highlighted the importance of considering social and school factors, as well as individual characteristics, in understanding the service needs of vulnerable groups. Self-concept is considered an important predictive of positive educational outcomes but findings from studies of

self-concept in children with disabilities are not consistent. Few population-based studies have been published about older Irish children with disabilities. Furthermore, there are limited published data on the SEN supports received by children in second-level education in Ireland.

The objectives of this study are; (i) to document the reported prevalence and type of disability found in a population-based sample of 13 year olds in Ireland, (ii) to characterise the socio-demographics and school context of these children with disabilities, (iii) to describe the nature of supports being received by this group in their first year of second-level education and, (iv) to explore the association between self-concept and the presence of a disability.

Materials and methods

Study design

This study was a cross-sectional, secondary analysis of quantitative data that were collected as part of the child cohort of the Growing Up in Ireland (GUI) study (Economic and Social Research Institute 2014a). The GUI is a nationally-representative sample of children living in Ireland.

The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines were followed in the conducting and reporting of this study (von Elm *et al.* 2007).

Ethics

The GUI study received a priori ethical approval from the Irish Health Board's Research Ethical Committee. Written consent was obtained for all participants in the study. Assent was also sought from the children who participated.

Participants

For the GUI study, sampling was undertaken in two stages using a clustered sample design. A stratified random sample of 1,105 schools was identified from a possible 3,000 in Ireland. From this, 910 schools (82.3%) agreed to participate. From these schools, a random sample of students was selected. For smaller schools (those with less than 40 students) all students were included. Eight thousand five hundred (8,500) children participated at 9 years of age. At time 2 (when the children were 13 years) the response rate was 91.2%, resulting in a final sample of 7,525 child participants. The data analysed for this study were limited to the sample who participated in data collection at time 2. Relevant data for this secondary analysis were

collected from questionnaires completed by the children who participated in the study (completed with an interviewer present), their primary caregiver (parent) and by the Principal of the school they attended.

Data collection

Disability status

Information about each child's disability status was obtained from the primary caregiver questionnaire. Questions included: the type of developmental disability diagnosis received, whether or not the child had been diagnosed with the disability by a professional, and the number of diagnoses the child had received. The primary caregiver was asked if their child had any of the following diagnoses/ disabilities: a physical disability (including a visual and/or a hearing impairment); a specific learning disability (SpLD); a learning disability (LD); autism spectrum disorder (ASD); an emotional/behavioural disorder (EBD) and a speech/language difficulty. Further categories not reported in this study included: a disability associated with a particular syndrome, slow progress (reasons unclear), and 'other,' where the parent could add their own comments. In this paper, we refer to some of the categories in language which is slightly different from that used in the questionnaire. We use speech, language and communication needs (SLCN) rather than "speech or language difficulty" when referring to children with these needs for consistency with the broader literature. This classification includes all possible profiles of need in this area (Dockrell *et al.* 2012; Bishop *et al.* 2017). We refer to the category of "physical disability" as physical and sensory disability (PSD), as we consider this to describe the category of need more accurately.

Socio-economic status

Two variables, *employment status* and *income*, were used as measures of SES. The Economic and Social Research Institute of Ireland (ESRI) who manage the GUI data set derived these. Employment status is determined based on the higher level of the primary and the secondary caregiver's occupations. Of note, it was not possible to categorise the employment of all families' who participated in the study. Income data from the data set were derived as a categorical variable by the ESRI, and are presented as quintiles. Whether the child lived in a single parent family or not was also used for analyses.

Health status

The primary caregiver questionnaire included two questions about whether or not the parent themselves had a chronic illness or any confirmed medical diagnosis, and whether their child had any chronic health condition.

School context

Four variables in relation to the school context of the children in the study were collected. First, a variable on whether or not the school was part of the "Delivering Equality of Opportunity in Schools" (DEIS) programme was included. DEIS is a programme in Ireland that allocates extra funding to schools that serve populations of high social disadvantage. The DEIS designation was determined from the school Principals' questionnaires. The second variable was the gender mix of the school that the child attended.

A third and fourth variable, based on self-report data from the children were included. The third was the number of episodes of bullying reportedly

experienced by the study child in school in the previous three months. The fourth related to each child's views of school.

Additional supports in school

As part of the primary caregiver questionnaire, respondents were asked to identify the different health and/or education professionals involved in delivering this additional supports to their child in school. Options included: a resource/learning support teacher, a school psychologist, an educational psychologist (EP), a special needs assistant (SNA), a speech and language therapist (SLT), supports as part of a behaviour management programme, and/or a visiting teacher. Further options included whether the child received technical assistance and/or transport services. These latter options were not included in our analyses.

In the primary caregiver questionnaire, parents were asked their view of the adequacy of the supports being received by their child. A Likert answer included *excellent, adequate, barely adequate, don't know*. Respondents were also able to tick a box if their child was not receiving any supports in school.

Self-concept

In the GUI data, self-concept was measured using the Piers-Harris Children's Self Concept Scale-2nd Edition (PHSCS-2) (Piers 2002). The PHSCS was standardised on a population of 1,387 children aged from 7 to 18 years and has been shown to have good internal consistency and test-retest reliability (Cronbachs α .91) (Piers 2002). Internationally, this is one of the most widely used measures of self-concept (Butler and Gasson 2005). The PHSCS-2 has six domains that relate to self-concept, measured

as six subscales that include behavioural adjustment, intellectual/school status, physical appearance, freedom from anxiety, popularity and happiness/satisfaction. The child's view of their self-concept is scored as either 1 or 0, depending on their yes or no responses to a series of statements across each domain. A total score for each subscale can be calculated, as well as a composite score. Each subscales has a different score range - for example, intellectual/ school status is scored from 0 to 16; behavioural adjustment and freedom from anxiety are scored from 0 to 14; physical appearance and attributes from 0 to 11; and happiness and satisfaction range from 0 to 10. For all subscales, the higher the score, the higher (better) the self-concept. Raw scores for each subscale and a total raw score for the complete test in the GUI data set were available; as was a derived variable to categorise the total score and the scores from each subscale into five levels, ranging from high to low self-concept. The derived categories were based on clinical cut-offs, as specified by the PHSCS-2. These were recoded into a binary outcome of low self-concept (y/n) for this secondary analysis.

Data analysis

Analyses were conducted using Stata software (StataCorp 2017). Weighting based on a minimum information loss algorithm has been calculated to adjust for differences between the GUI sample and the population at aged 13 years and a grossing factor has also been calculated (Economic and Social Research Institute 2014b). These adjustments were used during the analyses to allow for inferences to be made about the population from which the participants were sampled.

We took a cautious approach when managing missing data. Ten cases in the data set had incomplete reported data about disability status so these were omitted from the analyses. Descriptive statistics were used to characterise the population. The reported prevalence of children of this age with a diagnosis of one or more developmental disabilities was then calculated as a percentage of the total sample. Variables in relation to SES and income, school context, health status of child and parent, the child's views of school, and whether the parent reported the child as having experienced bullying in the last three months, were compared to children with and without disabilities, using chi-square tests.

The proportion of children receiving support from a range of health and education professionals was calculated. A series of multilevel logistic regression analyses were used to identify significant associations between disability status and disability type and self-concept scores, adjusting for individual and school level factors. Individual factors included in the analysis were SES, income, gender and self-reported episodes of bullying. School factors included DEIS status and gender mix of school. Adjusted odds ratios (ORs) and 95% confidence intervals (CIs) were reported in relation to each factor. All analyses conducted were weighted (aka statistically adjusted) to minimise sampling bias. Statistical significance was set at $p < 0.05$.

Results

Reported prevalence of disability

Of the total children for whom there were data on disability in the GUI sample ($n=7,515$), 1,304 (17.36%) had reportedly received one or more

diagnosis of a developmental disability. A total of 730 males (14.48%) received ≥ 1 disability diagnosis compared to 574 females (11.91%). The proportion of children by number of diagnoses is shown in Table 1.

Table 1 *Proportion of children with and without disabilities as reported by primary caregivers in the child cohort of the GUI data set*

N diagnoses	N children		Total N children	% of total sample (n=7515)
	Male	Female		
0	2949	3,261	6,211	82.64%
1	533	457	990	13.17%
2	124	73	197	2.62%
3	40	29	69	0.92%
4	33	15	48	0.65%

Table 2 displays the types of disability diagnoses reported by primary caregivers. The most common diagnosis allocated was SpLD (6.91%). PSD, which included children with a diagnosed hearing impairment and/or visual impairment as well as sensory needs, was the second most common diagnosis (6.5%), and a diagnosis of LD was the third (2.93%). The reported prevalence of SLCN was 2.12%, EBD was 1.54%, and ASD was the least common diagnosis (1.29%). Of note, some children had more than one diagnosis.

Table 2 *Type and number of disability diagnoses as reported by primary caregivers in the child cohort of the GUI data set.*

Type of diagnosis	N children			% of sample (n= 7515)
	Male	Female	Total	
SpLD	295	225	520	6.91%
PSD	249	240	489	6.50%
LD	130	90	220	2.93%
SLCN	105	55	160	2.12%
EBD	83	35	118	1.57%
ASD	77	20	97	1.29%

Note. SpLD = specific learning difficulties; PSD = physical and sensory disability; LD= learning disability; SLCN= speech, language and communication needs; EBD= emotional behavioural disorder; ASD= autistic spectrum disorder.

Group differences for socio-demographics, health status and school context

The socio-demographic data of children with and without a diagnosis of developmental disability are summarised in Table 3.

The presence of ≥ 1 disability diagnosis was significantly higher in boys than in girls ($p < 0.01$). A significantly greater proportion of children with a disability had a parent of lower employment status than did the children who had no diagnosis ($p < 0.01$) and they lived in a family with lower income levels than their TD peers. More children with a diagnosed disability had a chronic health condition, as did their parents, compared with their TD peers and the parents of the TD peers. A significantly greater proportion of

children with a disability attended a DEIS school than did children without a diagnosis. There were significant differences between the groups in terms of their self-reported view of school, with more children who had a disability reporting negative views of school compared with their TD peers. A significantly higher proportion of children with a diagnosed disability were reported to have been bullied in the last three months in school than were children without a diagnosis ($p < 0.01$).

Table 3 *Characteristics of children with and without a disability in the GUI data set*

Variables		Disability group (n=1304)		TD peers (n=6211)		P value
		N	%	N	%	
Gender:	Male	730	21.50%	2949	78.50%	P<.01
	Female	575	16.69%	2361	83.32%	
SES:^a	Professional	169	07.83%	1009	11.79%	P<.01
	Managerial	477	27.86%	2535	35.55%	
	Non-manual	217	16.28%	1169	19.35%	
	Skilled manual	200	18.91%	688	13.63%	
	Semi-skilled manual	98	11.51%	449	09.73%	
	Unskilled	22	02.59%	60	01.62%	
Income:	Lowest	225	25.29%	852	19.84%	P<.01
	2 nd	236	21.36%	947	20.21%	
	3 rd	223	20.05%	1088	19.44%	
	4 th	227	19.70%	1340	20.33%	
	Highest	241	13.50%	1509	20.14%	
Chronic health condition:						
	Child	340	28.44%	424	07.00%	P<.01
	Parent	307	25.05%	1023	17.31%	P<.01
DEIS* school:		223	25.06%	770	16.60%	P<.01
Lone parent family:		56	08.73%	329	08.46%	P=.72
Views of school:						
	I like it very much	355	24.57%	1956	29.57%	
	I like it quite a bit	388	28.72%	2074	33.10%	
	I like it a bit	365	31.63%	1513	25.55%	
	I don't like it very much	105	09.55%	429	07.94%	
	I hate it	47	04.87%	132	02.87%	P<.01
	I don't know	11	00.62%	51	00.94%	
No. of episodes of bullying:		224	18.39%	495	08.40%	p<.01

Note. TD = typically-developing; ^a a further category whereby “no class” could be assigned based on occupation has been omitted so percentages do not add up to 100%; ^bDEIS is a school recognised as part of national government programme as serving an area of social disadvantage.

Supports in school

The views of parents about supports in school are presented in Table 4. Primary caregivers were asked to give their view of the adequacy of the supports being received by their child. Those not receiving any report could select that as an answer. In terms of adequacy of supports, 14.70% of parents reported that the supports received by their child in school was excellent, 19.81% reported that the supports was adequate, 15.50% reported the supports was barely adequate and 1.30% reported they did not know. Forty nine percent of parents reported that their child was not receiving any supports in school. Thirty one percent of children with a diagnosis of SpLD, 71.16% of those with a diagnosis of PSD, 26.81% of those with a diagnosis of LD, 30% of children with SLCN, 14.43% of those with a diagnosis of ASD and 20.33% of those with EBD were reported by the primary caregiver as not receiving any supports in school.

Table 4 *Primary caregiver views of supports received by the children with a disability in school*

Adequacy of supports	Total (n=1304)	SpLD (n=520)	PSD (n=489)	LD (n=220)	SLCN (n=160)	ASD (n=97)	EBD (n=118)
Excellent	14.70%	18.84%	10.43%	19.54%	20.00%	19.58%	22.03%
Adequate	19.81%	25.00%	10.02%	27.27%	25.00%	38.14%	27.96%
Barely adequate	15.50%	24.42%	7.36%	26.36%	24.37%	27.83%	28.81%
Don't know	01.30%	00.57%	01.00%	00.00%	01.00%	00.00%	00.84%
No supports	49.00%	31.15%	71.16%	26.81%	30.00%	14.43%	20.33%

Note. Total= total number of children with a diagnosis in the data set; SpLD = specific learning disability; ASD = autistic spectrum disorder; SLCN= speech, language and communication needs; PSD= physical and sensory disability; LD= learning disability; EBD= emotional behavioural disorder.

Parents were also asked about the nature of supports received by their child in school. The results by disability type are presented in Table 5. Sixty nine percent of children with SpLD, 13.36% of those with PSD, 29.07% with LD, 16.11% with SLCN, 12.77% with ASD and 15.32% of those with EBD reportedly received supports from a resource/learning support teacher. Fifty one percent of children with SpLD, 26.36% of those with PSD, 50.90% of those with LD, 37.27% of those with SLCN, 35.45% of those with ASD and 28.18% of those with EBD reportedly received supports from an SNA. Forty six percent of children with SpLD, 26.36% of those with PSD, 50.90% of those with LD, 37.27% of those with SLCN, 35.45% of those with ASD and 28.18% of those with EBD reportedly received supports from a visiting teacher. Thirty one percent of children

with SpLD, 29.54% of those with PSD, 63.63% of those with LD, 17.11% of those with SLCN, 29.59% of those with ASD and 20.45% of those with EBD reportedly received supports from an SLT. Thirty eight percent of children with SpLD, 38.88% of those with PSD, 38.88% of those with LD, 38.89% of those with SLCN, 33.33% of those with ASD and 38.88% of those with EBD reportedly received supports from a national behaviour programme. Forty seven percent of children with SpLD, 24.53% of those with PSD, 49.06% of those with LD, 39.62% of those with SLCN, 24.53% of those with ASD and 18.87% of those with EBD reportedly received supports from a school psychologist. Sixty two percent of children with SpLD, 13.33% with PSD, 40% with LD, 35.55% with SLCN, 28.89% with ASD and 26.67% of children with EBD reportedly received assistance from the national educational psychology service.

Table 5 *Proportion of children receiving supports in school by disability type*

Professionals involved	SpLD	PSD	LD	SLCN	ASD	EBD
Resource teacher	62.99%	13.36%	29.07%	16.11%	12.77%	15.32%
SNA	51.37%	26.36%	50.90%	37.27%	35.45%	28.18%
Visiting teacher	46.15%	65.38%	46.15%	30.76%	19.23%	26.92%
SLT	31.81%	29.5%	63.63%	17.11%	29.59%	20.45%
Behaviour programme	38.88%	38.88%	38.88%	38.89%	33.33%	38.88%
School psychology	47.17%	24.53%	49.06%	39.62%	24.53%	18.87%
NEPs	62.22%	13.33%	40%	35.55%	28.89%	26.67%

Note. SpLD= specific learning disorder; PSD= physical and sensory disability; LD= learning disability; SLCN= speech, language and communication needs; ASD= autistic spectrum disorder; EBD= emotional behavioural disorder; SNA=special needs assistant; SLT= speech and language therapist; NEPs= national educational psychology service.

Association between a diagnosis of disability, disability type and scores of low self-concept

The adjusted ORs for low self-concept scores are presented in Table 5. Overall, there was a significant association between having a diagnosis of a developmental disability and low self-concept (OR =1.37, 95% CI 1.06-1.76). In relation to specific self-concept domains, there was a significant association between having a disability and low behavioural adjustment scores (OR =1.23, 95%; CI 1.04-1.44), low intellectual/ school status scores (OR =1.56, 95%; CI 1.30-1.88 and low popularity scores (OR =1.38, 95%;

CI 1.17-1.63) and having a diagnosis reduced the odds of low happiness scores (OR = .74, 95%; CI 0.61-.89).

Associations differed across disability type. Overall, children with a diagnosis of SpLD showed increased odds of low self-concept scores (OR= 1.49, 95%; CI 1.04-2.14). There were increased odds of low self-concept scores with intellectual/school status (OR= 2.23, 95%; CI 1.70-2.90). Conversely, a diagnosis of SpLD reduced the risk of low self-concept scores for physical appearance (R= 0.72*, 95% CI 0.54-0.96). A diagnosis of PSD did not increase the overall risk of low self-concept scores. However, there were significantly increased odds of low scores in popularity (OR= 1.44, 95% CI 1.12-1.85).

Those with a diagnosis of PSD were less likely to have low self-concept scores related to happiness (OR= 0.64, 95% CI 0.48- 0.85). Those with a diagnosis of LD showed an increased risk of low concept related to behavioural adjustment (OR= 1.66, 95% CI 1.15-2.40) and intellectual / school status (OR= 1.95, 95% CI 1.28-2.97). A diagnosis of SLCN increased the odds of having low scores in popularity (OR=1.7, 95% CI 1.10-2.63), as did having a diagnosis of ASD (OR= 3.4, 95%; CI 1.96-5.91). Those with a diagnosis of EBD showed increased odds of having low self-concept scores overall (OR= 2.97, 95%; CI 1.49-5.97) as well as behavioural adjustment scores (OR=2.04, 95%;CI 1.25-3.30). A diagnosis of EBD was associated with a reduced risk of low self-concept in the domain of happiness (OR= 0.56, 95% CI 0.32-0.98).

Table 6 *Adjusted odds ratios of risk of low self-concept scores by disability type*

	Total self-concept score^a	BEH Odds Ratio	INT Odds Ratio	PHY Odds Ratio	FRE Odds Ratio	POP Odds Ratio	HAP Odds Ratio
	(95% CI)	(95% CI)	(95% CI)	(95% CI)	(95% CI)	(95% CI)	(95% CI)
Disability diagnosis	1.37* (1.06-1.76)	1.23* (1.05-1.44)	1.56* (1.30-1.88)	0.85 (0.69-1.03)	0.95 (0.78-1.16)	1.38* (1.17- 1.63)	0.74* (0.61-0.89)
SpLD	1.49* (1.04-2.14)	1.08 (0.85-1.37)	2.23* (1.70-2.90)	0.72* (0.54-0.96)	0.89 (0.67-1.18)	0.99 (0.76-1.30)	0.86 (0.66-1.13)
PSD	1.43 (0.98-2.08)	0.91 (0.71-1.16)	0.94 (0.71-1.25)	1.30 (0.97-1.74)	1.00 (0.75-1.34)	1.44* (1.12-1.85)	0.64* (0.48-0.85)
LD	1.38 (0.80-2.40)	1.66* (1.15-2.40)	1.95* (1.28-2.97)	0.83 (0.53-1.30)	0.77 (0.50-1.20)	1.30 (0.88-1.91)	0.72 (0.47-1.11)
SLCN	1.24 (0.65-2.37)	1.28 (0.84-1.95)	1.17 (0.72-1.92)	0.68 (0.40-1.15)	0.59 (0.35-1.00)	1.70* (1.10-2.63)	1.31 (0.82-2.10)
EBD	2.97* (1.49-5.97)	2.04* (1.25-3.30)	1.06 (0.62-1.80)	1.17 (0.42-1.31)	0.96 (0.55-1.70)	1.38 (0.83-2.28)	0.56* (0.32-0.98)
ASD	1.47 (0.66-3.28)	0.99 (0.59-1.68)	1.09 (0.59-1.99)	0.88 (0.47-1.65)	0.98 (0.53-1.81)	3.40* (1.96-5.91)	0.82 (0.45-1.52)

Note. ^a as measured by the Piers-Harris Children's Self-Concept Scale- 2nd Edition; BEH=behavioural adjustment; INT= intellectual/School Status; PHY= physical appearance; FRE= freedom from anxiety; POP= popularity; HAP=happiness and satisfaction; PSD= physical and sensory disability; SpLD= specific learning difficulties; LD= learning disability; EBD= emotional behavioural disorder; SLCN= speech, language and communication needs; ASD= autistic spectrum disorder.

Discussion

This is one of few studies to characterise the life circumstances and self-concept of Irish children with developmental disabilities using data from a population-based sample. From examining this sample (N =7,515) of 13 year olds in Ireland, 17.07% of children were reported to have a diagnosis of one or more developmental disabilities by their primary caregiver. We found a significant gender difference among those identified as having a disability, with more boys than girls in the sample having a diagnosed disability. Significant differences were also identified between groups in relation to socio-economic status with more children with a disability in the lower socioeconomic groups. Our findings were that both children with a disability and their parents had poorer health status when compared to their typically-developing peers. We also found that more children with disabilities reported that they disliked school and had experienced more episodes of bullying than did their TD peers.

Based on reports from primary caregivers, 49% of 13 year olds with a diagnosed developmental disability were not in receipt of SEN supports from either health or education professionals in the first year of second-level education. Overall, adjusting for individual and school level factors, there was an increased risk of low self-concept scores amongst those with a disability across three of five self-concept domains (behaviour, intellectual status and popularity) but a reduced risk of having low self-concept related to happiness. The odds of low self-concept differed across disability type.

Although single reported measures of disability are not considered a reliable method of estimating prevalence (Department of Health 2018), it is

noteworthy that overall reports of prevalence were broadly consistent with the findings of recent estimates from a meta-analysis of international prevalence of population-based studies (Maulik *et al.* 2011). Parent reports of a diagnosis of SpLD and ASD were also in line with international prevalence estimates from the USA and the UK (Katusic *et al.* 2001; Shaywitz *et al.* 1990; Newschaffer *et al.* 2005; Baron-Cohen *et al.* 2009). However, the proportion of children reported by parents as having a diagnosis of SLCN is low (1.63%) compared with other prevalence studies. In Australia for example, in a study of children of a similar age, based on teacher reports, a prevalence of 12.3% was identified (McLeod and McKinnon 2007). It may be that children with SLCN in Ireland are disproportionately under-diagnosed relative to other disability groups. Under-identification of SLCN has been reported in the UK (Dockrell and Howell 2015). It is not possible to draw inferences about the discrepancy between parental reports of EBD in this sample and prevalence figures elsewhere, due to differences in how such needs are categorised. In the USA for example, a much higher prevalence of EBD is reported (Merikangas *et al.* 2010). However, in those studies mental health diagnoses are included as one disability category whereas, in the GUI data set, EBD and mental health diagnoses are categorised separately. It is likely that the lower reported prevalence of 1.27% in the Irish sample is accounted for by differences in categorisation, rather than an under-identification of needs per se.

In terms of socio-demographics, more boys than girls in this sample presented with a disability; a finding which has been well-documented in other population-based studies (Houtrow *et al.* 2014). Irish children with

disabilities are more likely to experience higher levels of poverty and social disadvantage, to attend a school with increased levels of social deprivation, and to have poorer health status, consistent with previous population-based studies from the UK (Blackburn *et al.* 2010) and the USA (Spencer *et al.* 2013). Our data also show poorer health status for parents of children with disabilities, in line with previous study findings (Emerson 2003; Emerson *et al.* 2006). For lone parent families, Ireland and the UK have similar proportions of families with one caregiver (one in four) (Gregg *et al.* 2009). In contrast to (Blackburn *et al.* 2010), we found no difference in the proportion of lone parent families with a child with a disability, compared to those without.

In this sample, more children with a diagnosis of a developmental disability reported a negative view of school and more episodes of bullying than did their TD peers. Negative views of school were found among the same cohort 4 years earlier, at 9 years, when they attended primary education - which McCoy and Banks (2012) found to be mediated by children's levels of academic engagement and peer relations. These reports of bullying are consistent with a comprehensive review of the literature from the UK on bullying and disability (McLaughlin *et al.* 2010).

The large proportion of children (49%) not receiving supports in school identified in the study is noteworthy as Ireland is a relatively large investor in education in terms of percentage of public expenditure, compared to other OECD countries (OECD 2018). However this finding is consistent with views of school principals, reported as part of a national review of Irish schools conducted by Rose *et al.* (2015). This is also

consistent with parents' view of supports reported elsewhere (Kelly et al. 2014; Day and Prunty 2015). It would be useful to examine these findings against data held by the Irish Health Services' Executive and/or the national council for special education, the two public bodies responsible for providing SEN supports to schools in Ireland. However input to these data sets is currently voluntary, and therefore may not include all pertinent data (Department of Health 2018).

Discrepancies in the types of SEN supports received by children were evident, not readily accounted for by the nature of a child's diagnosis. For example, the lowest proportions of children receiving speech and language therapy supports from an SLT in school were those with SLCN (17%) and ASD (29.59%), compared with those who have a diagnosis of LD (63.93%). Conversely, many of those in receipt of supports from an SNA would not be expected to have significant care needs. For example, 51.37% of those with a diagnosis of specific learning difficulties (dyslexia, dyscalculia and/or dyspraxia) were reportedly in receipt of these supports. This may be because many children with developmental disabilities have additional needs or it may be, as has been reported elsewhere (Giangreco et al. 1997; Giangreco et al. 2001; Giangreco 2013), that SNAs are being deployed for wider duties in Irish schools than is documented. Since this wave of GUI data collection, the Irish government has announced a further increase in the number of SNAs to be employed in Irish schools (Department of Education and Skills 2019). We suggest, consistent with Giangreco (2013), that the impact of such a model of delivery on the inclusion of the child with SEN in school requires further research.

A small proportion of children with PSD were reported to be receiving supports in school, yet later, a large proportion were reported to receive supports from a visiting teacher. It may be that parents consider visiting or consultative models of support as qualitatively different to supports provided by those who consistently work in school. Occupational therapists (OTs) were not included as an option in the GUI questionnaire in the list of supports received within school, from which parents could choose. Since the collection of the GUI data however, a pilot therapy service to schools that includes OT services has been proposed by the government (Department of Education and Skills 2018), suggesting an increased awareness of the importance of the role of these professionals in providing supports in school. The same proportion of 13 year olds (roughly a third), regardless of their disability diagnosis, was in receipt of supports from the national behaviour programme for emotional/behavioural needs. This is despite the fact that only 1.27% of the sample had reportedly received a formal diagnosis of EBD. This finding suggests that the needs of children with disabilities in second-level education are interpreted as behavioural in nature and managed as such.

A disability diagnosis was associated with an increased risk of low self-concept in relation to behaviour, intellectual status and popularity. Consistent with Zeleke (2004), a diagnosis of SpLD in this study significantly increased the risk of low self-concept, but only in intellectual status. A diagnosis of PSD was associated with low self-concept in the social domain of popularity. Consistent with a previous review of the literature, LD was associated with a significant risk of low self-concept in

intellectual/academic achievement (Zelege 2004). A diagnosis of SLCN or ASD was associated with an increased risk of low self-concept in popularity as would be expected given the reported difficulties such children have in maintaining friendships (Joffe et al. 2012). ASD was more associated than SLCN with greater risk of low self-concept in this domain. A diagnosis of EBD was associated with a significant increased risk of low self-concept related to behaviour, consistent with the findings of (Wei and Marder 2011). Given the proportions of children in the sample receiving emotional/behavioural supports, it is surprising that other diagnoses were not also associated with low self-concept. This may suggest that children with disabilities perceive their needs differently than do their teachers.

In contrast to much of the literature, we found reduced odds of low self-concept in some domains across disability types. A diagnosis of EBD and PSD significantly reduced the risk of low self-concept in the happiness domain. A further positive finding was that there was no association identified between having a disability diagnosis and anxiety.

Several initiatives in recent years within Irish education may partly account for these findings, such as additional funding allocations for schools serving under-privileged communities, as well as a national programme providing emotional/behavioural interventions.

Limitations

The GUI data set was designed for researchers to study the lives of children in Ireland. The strength of such an initiative is the broad range of variables that are included in the data set. However, such data sets have several well-documented limitations in measurement of prevalence and

disability. The data set does not include specific clinical measures related to different disability types, making it impossible to robustly calculate prevalence data. It also contains pre-defined categories of disabilities, suggesting that these diagnoses reflect needs, which are distinct from each other. In reality, such needs are often on a continuum (Dollaghan 2011; Tomblin 2011), such that analysing the needs of children as categorically different can be problematic. Further, discrepancy criteria that are still used in diagnosing “specific” learning disabilities are not supported by empirical studies, raising questions about the validity of this category (Meijer and Education 2003).

A further limitation is that no measure of the impact of having a disability diagnosis on the functioning of the child has been included in the analysis. The extent to which a child is impacted on by their disability may influence their self-concept. Likewise, the interaction between different combinations of diagnoses, which was not taken into account in this analysis, could have an effect on self-concept.

Specific models of SEN supports in school are not detailed in the data set. Parents may have only considered one model, such as a professional working directly with their child, when responding to questions about supports. In reality, many models of support in school are indirect - involving the implementation of strategies in the classroom under the advice of another professional.

Finally, the authors acknowledge that other factors shown to influence self-concept, such as parental expectation, were not included in the analysis and this may have influenced the results (Schunk and Meece 2006).

Conclusions and recommendations

We have explored a large, nationally-representative data set to characterise the life circumstances and self-concept of Irish 13 year olds. We used grossing and weighting factors in our analyses so that inferences about 13 year olds with disabilities in Ireland could be made at a population level. We identified that Irish children with disabilities in this sample had a complex combination of social and educational needs. We also identified a large proportion of children who were not receiving any additional supports in school to address their needs. Discrepancies were evident in the nature and amount of supports received by the children, not readily accounted for by the nature of their diagnosis. Our findings highlight the need for improved therapy service models of support in school for Irish children with a disability. From parental reports, it appears that the needs of children with speech, language and communication difficulties are disproportionately under-identified compared with other disability groups. Further, this group reportedly received the least amount of SLT supports in school than children with other disabilities. Given the essential role that language plays in accessing the curriculum (Dockrell and Lindsay 1998; Graham *et al.* 2018), and the lifelong implications of having reduced language skills (Kevin Durkin *et al.* 2009; Conti-Ramsden and Durkin 2012), this finding is concerning. Reliable measures of prevalence and regular, detailed, service audits are required to corroborate these findings and to ensure policy and

service planning is responsive to the needs of the Irish school-aged population who have disabilities.

Acknowledgements

We thank the families and children who took part in the GUI study whose data we accessed for this work. We would also thank the Central Statistics Research Unit for their support in accessing the GUI data set. We would also like to thank the reviewers for their comments on an earlier draft of this paper. The Growing Up in Ireland study is funded by the Department of Children and Youth Affairs. It is managed by the Department of Children and Youth Affairs in association with the Central Statistics Office. Results in this report are based on analyses of data from Research Microdata Files provided by the Central Statistics Office. Neither the Central Statistics Office nor the Department of Children and Youth Affairs take any responsibility for the views expressed or the outputs generated from these analyses.

References

- Baron-Cohen, S., Scott, F.J., Allison, C., Williams, J., Bolton, P., Matthews, F.E. and Brayne, C. (2009) 'Prevalence of autism-spectrum conditions: UK school-based population study', *The British Journal of Psychiatry*, 194(6), 500-509.
- Bishop, D., Snowling, M.J., Thompson, P. and Greenhalgh, T. (2017) 'Phase 2 of catalise: A multinational and multidisciplinary delphi consensus study of problems with language development: Terminology', *Journal of Child Psychology and Psychiatry*, 58(10), 1068-1080.
- Blackburn, C.M., Spencer, N.J. and Read, J.M. (2010) 'Prevalence of childhood disability and the characteristics and circumstances of disabled children in the uk: Secondary analysis of the family resources survey', *BMC Pediatrics* [online], available: <https://dx.doi.org/10.1186/1471-2431-10-21>.
- Blake, J.J., Kim, E.S., Lund, E.M., Zhou, Q., Kwok, O.M. and Benz, M.R. (2016) 'Predictors of bully victimization in students with disabilities: A longitudinal examination using a national data set', *Journal of Disability Policy Studies*, 26(4), 199-208.
- Boyd, D.R., Bee, H.L. and Johnson, P.A. (2006) *Lifespan development*, 7th ed, Houston:Pearson.
- Brault, M.W. (2012) *Americans with disabilities: 2010*, Washington, DC: United States Department of Commerce, available: <https://www2.census.gov/library/publications/2012/demo/p70-131.pdf> [accessed 2 June 2019].
- Burden, R. (2008) 'Is dyslexia necessarily associated with negative feelings of self-worth? A review and implications for future research', *Dyslexia*, 14(3), 188-196.
- Butler, R.J. and Gasson, S.L. (2005) 'Self esteem/self concept scales for children and adolescents: A review', *Child and Adolescent Mental Health*, 10(4), 190-201.

- Byrne, B. (1996) 'Measuring self-concept across the life span: Issues and instrumentation, Washington, DC: American Psychological Association.
- Chen, S.K., Hwang, F.M., Yeh, Y.C. and Lin, S.S. (2012) 'Cognitive ability, academic achievement and academic self-concept: Extending the internal/external frame of reference model', *British Journal of Educational Psychology*, 82(2), 308-26.
- Conti-Ramsden, G. and Durkin, K. (2012) 'Postschool educational and employment experiences of young people with specific language impairment', *Language, Speech and Hearing Services in Schools*, 43(4), 507-20.
- Conti-Ramsden, G. and Botting, N. (2008) 'Emotional health in adolescents with and without a history of specific language impairment (SLI)', *Journal of Child Psychology and Psychiatry*, 49(5), 516-525.
- Day, T. and Prunty, A. (2015) 'Responding to the challenges of inclusion in Irish schools', *European Journal of Special Needs Education*, 30(2), 237-252.
- Department of Education and Skills (2017) *Guidelines for schools supporting children with special educational needs in mainstream schools*, Dublin: Department of Education and Skills, available: <https://www.education.ie/en/The-Department/Announcements/Guidelines-for-Schools-Supporting-Children-with-Special-Educational-needs-in-Mainstream-Schools.html> [accessed 30.06.19].
- Department of Education and Skills (2018) *Government launch new project to bring specialised therapists into schools and pre-schools* [press release], 14 May, available: <https://www.education.ie/en/Press-Events/Press-Releases/2018-press-releases/PR18-05-14.html> [accessed 30.06.19].
- Department of Education and Skills (2019) *Minister mchugh announces almost 800 new special needs assistant posts being allocated to*

schools for september 2019 [press release], 27 May, available: https://www.google.com/search?q=Minister+mchugh+announces+almost+800+new+special+needs+assistant+posts+being+allocated+to+schools+for+september+2019&rlz=1C1GNAM_enIE675IE675&oq=Minister+mchugh+announces+almost+800+new+special+needs+assistant+posts+being+allocated+to+schools+for+september+2019&aqs=chrome..69i57.825j0j7&sourceid=chrome&ie=UTF-8 [accessed 3 June 2019].

Department of Health (2018) *Estimating prevalence of autism spectrum disorders (asd) in the irish population: A review of data sources and epidemiological studies*, Dublin: Department of Health, available: <https://health.gov.ie/wp-content/uploads/2018/12/ASD-Report-Final-19112018-For-publication.pdf> [accessed 10 July 2019].

Disability Act 2005, No. 14/2005, Dublin: Stationary Office, available: <http://www.irishstatutebook.ie/eli/2005/act/14/enacted/en/html> [accessed 30.06.19].

Dockrell, J. and Lindsay, G. (1998) 'The ways in which speech and language difficulties impact on children's access to the curriculum', *Child Language Teaching and Therapy*, 14(2), 117-133.

Dockrell, J., Lindsay, G., Roulstone, S. and Law, J. (2012) *Better communication research programme*, London: Department of Education, available: <https://www.bettercommunication.org.uk/BCRP/DFE-RR247-BCRP1.pdf> [accessed 3 May 2019]

Dockrell, J. and Howell, P. (2015) 'Identifying the challenges and opportunities to meet the needs of children with speech, language and communication difficulties: British Journal of Special Education', *British Journal of Special Education*, 42(4), 411-428.

Dollaghan, C.A. (2011) 'Taxometric analyses of specific language impairment in 6-year-old children', *Journal of speech, language, and hearing research*, 54(5), 1361-1371.

- Durkin, K., Simkin, Z., Knox, E. and Conti-Ramsden, G. (2009) 'Specific language impairment and school outcomes. Ii: Educational context, student satisfaction, and post-compulsory progress', *International Journal of Language and Communication Disorders*, 44(1), 36-55.
- Economic and Social Research Institute. (2014a) *Growing up in Ireland Child Cohort Wave 2 - 13 years*, [data set], V.1, Irish Social Science Data Archive, Central Statistic Office, Ireland, available: <http://www.ucd.ie/issda/data/GUChild/GUChildWave2> [accessed 7 Aug 2019].
- Economic and Social Research Institute. (2014b) *A summary guide to wave 2 of the child cohort (at 13 years) of Growing Up in Ireland*, available: https://www.ucd.ie/issda/t4media/Summary%20guide%20to%20the%20datasets%20-%20Child%20-%20Wave%20_V1.2.pdf [accessed 30.06.19].
- EPSEN Act 2004, No. 30/2004, Dublin: Stationary office, available: <http://www.irishstatutebook.ie/eli/2004/act/30/enacted/en/html> [accessed 30.06.19].
- Eggleston, M., Hanger, N., Frampton, C. and Watkins, W. (2012) 'Coordination difficulties and self-esteem: A review and findings from a new zealand survey', *Australian Occupational Therapy Journal*, 59(6), 456-462.
- Emerson, E. (2003) 'Mothers of children and adolescents with intellectual disability: Social and economic situation, mental health status, and the self-assessed social and psychological impact of the child's difficulties', *Journal of Intellectual Disability Research*, 47(4-5), 385-399.
- Emerson, E. (2012) 'Understanding disabled childhoods: What can we learn from population-based studies?', *Children and Society*, 26(3), 214-222.

- Emerson, E. and Baines, S. (2011) 'Health inequalities and people with learning disabilities in the UK', *Tizard Learning Disability Review*, 16(1), 42-48.
- Emerson, E., Hatton, C., Llewellyn, G., Blacker, J. and Graham, H. (2006) 'Socio-economic position, household composition, health status and indicators of the well-being of mothers of children with and without intellectual disabilities', *Journal of Intellectual Disability Research*, 50(12), 862-873.
- Fujiura, G.T. and Yamaki, K. (2000) 'Trends in demography of childhood poverty and disability', *Exceptional Children*, 66(2), 187-199.
- Gage, N.A. and Lierheimer, K. (2012) 'Exploring self-concept for students with emotional and/or behavioral disorders as they transition from elementary to middle school and high school', *Education Research International* [online], available: <http://dx.doi:10.1155/2012/871984>.
- Giangreco, M.F. (2013) 'Teacher assistant supports in inclusive schools: Research, practices and alternatives', *Australasian Journal of Special Education*, 37(2), 93-106.
- Giangreco, M.F., Edelman, S.W. and Broer, S.M. (2001) 'Paraprofessional support of students with disabilities: Literature from the past decade', *Exceptional Children*, 68(1), 45-63.
- Giangreco, M.F., Edelman, S.W., Luiselli, T.E. and MacFarland, S.Z. (1997) 'Helping or hovering? Effects of instructional assistant proximity on students with disabilities', *Exceptional Children*, 64(1), 7-18.
- Graham, L.J., Tancredi, H., Willis, J. and McGraw, K. (2018) 'Designing out barriers to student access and participation in secondary school assessment', *The Australian Educational Researcher*, 45(1), 103-124.

- Green, J., Liem, G.A., Martin, A.J., Colmar, S., Marsh, H.W. and McInerney, D. (2012) 'Academic motivation, self-concept, engagement, and performance in high school: Key processes from a longitudinal perspective', *Journal of Adolescence*, 35(5), 1111-22.
- Gregg, P., Harkness, S. and Smith, S. (2009) 'Welfare reform and lone parents in the UK', *The Economic Journal*, 119(535), 38-65.
- Hattie, J. (2014) *Self-concept*, 2nd ed. Hove: Psychology Press.
- Houtrow, A.J., Larson, K., Olson, L.M., Newacheck, P.W. and Halfon, N. (2014) 'Changing trends of childhood disability, 2001–2011', *Pediatrics* [online], available: <https://dx.doi.org/10.1542/peds.2014-0594>
- Huang, C. (2011) 'Self-concept and academic achievement: A meta-analysis of longitudinal relations', *Journal of School Psychology*, 49(5), 505-528.
- Joffe, V.L., Nippold, M.A. and Oetting, J. (2012) 'Progress in understanding adolescent language disorders', *Language, Speech and Hearing Services in Schools*, 43(4), 438-444.
- Katusic, S.K., Colligan, R.C., Barbaresi, W.J., Schaid, D.J. and Jacobsen, S.J.(2001) 'Incidence of reading disability in a population-based birth cohort ', *Mayo Clinic Proceedings*, 76(11), 1081-1092.
- Kelly, A., Devitt, C., O'Keeffe, D. and Donovan, A.M. (2014) 'Challenges in implementing inclusive education in ireland: Principal's views of the reasons students aged 12+ are seeking enrollment to special schools', *Journal of Policy and Practice in Intellectual Disabilities*, 11(1), 68-81.
- Lindsay, G. and Dockrell, J. (2000) 'The behaviour and self-esteem of children with specific speech and language difficulties', *British Journal of Educational Psychology*, 70(4), 583-601
- Marsh, H. W., and Martin, A. J. (2011) 'Academic self-concept and

- academic achievement: Relations and causal ordering', *Journal of Educational Psychology*, 81(1), 59–77.
- Maulik, P.K., Mascarenhas, M.N., Mathers, C.D., Dua, T. and Saxena, S. (2011) 'Prevalence of intellectual disability: A meta-analysis of population-based studies', *Research in Developmental Disabilities*, 32(2), 419-436.
- McCoy, S. and Banks, J. (2012) 'Simply academic? Why children with special educational needs don't like school', *European Journal of Special Needs Education*, 27(1), 81-97.
- McCoy, S., Banks, J. and Shevlin, M. (2012) 'School matters: How context influences the identification of different types of special educational needs', *Irish Educational Studies*, 31(2), 119-138.
- McLaughlin, C., Byers, R. and Vaughn, R. (2010) *Responding to bullying among children with special educational needs and/or disabilities*, London, UK: Anti-Bullying Alliance, available: https://www.anti-bullyingalliance.org.uk/sites/default/files/uploads/SEND_bullying_Literature_Review.pdf [accessed 1 Aug 2019].
- McLeod, S. and McKinnon, D.H. (2007) 'Prevalence of communication disorders compared with other learning needs in 14,500 primary and secondary school students', *International Journal of Language and Communication Disorders*, 42 (1), 37-59.
- Meijer, C.J., Soriano, V. and Watkins, A. (2003) *Special needs education in europe: Thematic publication*, Odense, European Agency for Development in Special Needs Education, available: https://www.european-agency.org/sites/default/files/special-needs-education-in-europe-volume-2-provision-in-post-primary-education_Thematic-EN.pdf [accessed 2 Aug 2019].
- Merikangas, K.R., He, J.-p., Burstein, M., Swanson, S.A., Avenevoli, S., Cui, L., Benjet, C., Georgiades, K. and Swendsen, J. (2010) 'Lifetime prevalence of mental disorders in U.S. adolescents: Results

from the national comorbidity survey replication–adolescent supplement (NCS-A)', *Journal of the American Academy of Child and Adolescent Psychiatry*, 49(10), 980-989.

Murray, A., McCrory, C., Thornton, M., Williams, J., Quail, A., Swords, L., Doyle, E. and Harris, E. (2011) *Growing up in Ireland: Design, instrumentation and procedures for the child cohort*, Dublin: Department of Children and Youth Affairs, available: <https://www.esri.ie/publications/growing-up-in-ireland-design-instrumentation-and-procedures-for-the-child-cohort-at-wave-two-13-years> [accessed 3 Feb 2019].

Newschaffer, C.J., Falb, M.D. and Gurney, J.G. (2005) 'National autism prevalence trends from united states special education data', *Pediatrics* [online], available: <http://dx.doi.org/10.1542/peds.2004-1958>

OECD (2018) *Education at a glance: OECD indicators*, Paris: OECD Publishing, available: https://read.oecd-ilibrary.org/education/education-at-a-glance-2018/ireland_eag-2018-51-en#page1 [accessed 3 May 2019].

Piers, E.V. (2002) *The piers-harris children's self concept scale* 2nd ed., CA: Western Psychological Services.

Poole, K., Schmidt, L., Ferro, M., Missiuna, C., Saigal, S., Boyle, M. and van Lieshout, R. (2018) 'Early developmental influences on self esteem trajectories from adolescence through adulthood: Impact of birth weight and motor skills', *Development and Psychopathology*, 30(1), 113-123.

Rose, C.A., Stormont, M., Wang, Z., Simpson, C.G., Preast, J.L. and Green, A.L. (2015) 'Bullying and students with disabilities: Examination of disability status and educational placement', *School Psychology Review*, 44(4), 425-444.

- Rose, R., Shevlin, M., Winter, E. and O'Raw, P. (2015) *Project IRIS— inclusive research in Irish schools, A longitudinal study of the experiences of and outcomes for pupils with Special Educational Needs (SEN) in Irish Schools*, available: <https://pdst.ie/sites/default/files/NCSE-IRIS-Report-No20.pdf> [accessed 4 Feb 2018].
- Schunk, D.H. and Meece, J.L. (2006) 'Self-efficacy development in adolescence' in Urdan, T. and Pajares, F., eds., *Self-efficacy beliefs of adolescents*, Connecticut: Information Age Publishing, 71-96.
- Shaywitz, S.E., Shaywitz, B.A., Fletcher, J.M. and Escobar, M.D. (1990) 'Prevalence of reading disability in boys and girls: Results of the connecticut longitudinal study', *Journal of the American Medical Association*, 264(8), 998-1002.
- Spencer, N., Thanh, T.M. and Louise, S. (2013) 'Low income/socio-economic status in early childhood and physical health in later childhood/adolescence: A systematic review', *Maternal and Child Health Journal*, 17(3), 424-431.
- Spencer, N.J. and Blackburn, C.M. (2015) 'Disabling chronic conditions in childhood and socioeconomic disadvantage: A systematic review and meta-analyses of observational studies' *BMJ Open* [online], available: <http://dx.doi.org/10.1136/bmjopen-2014-007062>.
- StataCorp (2017) *Stata statistical software* (V.15) [accessed 7 Aug 2019].
- Tomblin, J.B. (2011) 'Co-morbidity of autism and sli: Kinds, kin and complexity', *International Journal of Language and Communication Disorders*, 46, 127-137.
- von Elm, E., Altman, D.G., Egger, M., Pocock, S.J., Gøtzsche, P.C. and Vandembroucke, J.P. (2007) 'The strengthening the reporting of observational studies in epidemiology (strobe) statement: Guidelines for reporting observational studies', *Annals of Internal Medicine*, 147(8), 573-577.

- Wei, X. and Marder, C. (2012) 'Self-concept development of students with disabilities: Disability category, gender, and racial differences from early elementary to high school', *Remedial and Special Education*, 33(4), 247-257.
- World Health Organization (2011) *World report on disability*, Geneva: WHO Press, available: http://www.who.int/disabilities/world_report/2011/en/index.html [accessed 22 Nov 2018].
- Zeedyk, S., Rodriguez, G., Tipton, L., Baker, B. and Blacher, J. (2014) 'Bullying of youth with autism spectrum disorder, intellectual disability, or typical development: Victim and parent perspectives', *Research in Autism Spectrum Disorders*, 8(9), 1173-1183.
- Zelege, S. (2004) 'Self-concepts of students with learning disabilities and their normally achieving peers: A review', *European Journal of Special Needs Education*, 19(2), 145-170.

Chapter 4

Paper II

Gallagher, A. L., Murphy, C. A., Conway, P. and Perry, A. (2019) 'Consequential differences in perspectives and practices concerning children with developmental language disorders: An integrative review', International Journal of Language and Communication Disorders.

This research article is the second of six manuscripts presented as chapters 3-6 of the doctoral thesis. In this paper, the findings of an integrative review of the literature across speech and language therapy and education are reported. The paper was conceived and written by the PhD candidate with guidance from Professor Alison Perry, Dr. Carol-Anne Murphy and Professor Paul Conway.

One aim of the study reported was to examine the empirical and policy literature, across the fields of speech and language therapy and education, for evidence of a shared understanding about DLD. A second aim was to describe any differences and/or shared perspectives and to consider the implications of the findings for collaborative practice.

Specific research questions to be addressed were:

- (i) How is DLD conceptualised in the SLT and education literature?
- (ii) Is there evidence of a shared understanding about DLD? If so what is shared? If not, where do the differences lie?
- (iii) What are the implications of these findings for collaborative practice?

Consequential differences in perspectives and practices concerning children with developmental language disorders: An integrative review

Abstract

Background

Inter-professional collaboration (IPC) has been recommended for many years as a means by which the needs of children with developmental language disorders (DLD) can be met at school. However, effective IPC remains difficult to achieve and our knowledge of how to support it is limited. A shared understanding between those involved has been identified as critical to IPC.

Aims

To examine the literature, as one source of data, for evidence of a shared understanding between the fields of speech and language therapy and education about children with DLD and how such needs can best be met at school.

Methods and Procedures

An integrative review of the literature was undertaken. A systematic search of the published, peer-reviewed literature (between 2006 and 2016) was conducted for empirical and theoretical papers and a manual search was undertaken to obtain a representative sample of policy/ professional guidelines. Eighty one papers across SLT and education were included in the review. The papers were scrutinised using a qualitative content analysis.

Main contribution

Although some commonality between perspectives in the literature was identified, differences between the fields dominated. These differences

related to how DLD is conceptualised; how children's needs are assessed; which outcomes are prioritised and how best these outcomes can be achieved. We also found differences about what constitutes useful knowledge to guide practice. We suggest that the nature of the differences we identified in the literature may have negative implications for practitioners wishing to collaborate to meet the needs of children with DLD in school. The perspectives of practising speech and language therapists and teachers need to be sought, to determine whether the findings from the literature reflect dilemmas in practice.

Conclusions

Effective IPC is essential to meet the needs of children with DLD in school; yet it remains difficult to achieve. Our review of the literature across speech and language therapy and education indicates evidence of a lack of shared understanding about DLD. If these differences are also evident in practice, then a conceptual model to support IPC may be warranted.

Keywords: Inter-professional collaboration, integrative review, developmental language disorder, special educational needs, qualitative content analysis.

What is already known

Inter-professional collaboration (IPC) is recommended as a means by which the needs of children with DLD in school can be met, but in practice it is difficult to achieve. A shared understanding has been identified as being important if professionals are to collaborate effectively. Our knowledge of the extent to which such an understanding exists between speech and language therapy and education is limited.

What this study adds

This is the first study which has aimed to compare and contrast the literature across SLT and education in order to examine the extent to which a shared understanding exists about children with developmental language disorders. The study findings highlight differences in perspectives which may have implications for practitioners when collaborating.

Clinical implications of the study

Understanding perspectives in the literature as well as those of pertinent stakeholders can inform methods of supporting inter-professional collaboration when working with children who have developmental language disorders in school.

Introduction

At least 7% of the school-aged population have a persistent difficulty learning language in the absence of a known cause (Lindsay and Strand 2016; McLeod and McKinnon 2007; Tomblin *et al.* 1997). Until recently, this population were referred to as having a ‘specific language impairment’ but as a result of a recent consensus process, are now referred to as having a ‘developmental language disorder’ (DLD)¹. Such a difficulty can have a negative impact on a child’s social, emotional and educational outcomes (Conti-Ramsden *et al.* 2009; Lindsay and Dockrell 2012). Both speech and language therapists (SLTs) and teachers are professionally bound to ensure that children with DLD can achieve and participate fully in school.

For many years, inter-professional collaboration (IPC) has been recommended in policy as a means by which the needs of children with additional needs can be met in school (United Nations Education Scientific and Cultural Organization 1994; World Health Organization 2011). It is recognised as essential to the role of the SLT working in schools (American Speech-Language-Hearing Association; 2010; Royal College of Speech and Language Therapists 2018; Speech Pathology Australia 2011) and has been the subject of ongoing discussion in the speech and language therapy literature (Law *et al.* 2002; McCartney 1999; McCartney 2000; McCartney 2002). While restructuring of speech and language therapy services in some countries has allowed SLTs to work more directly in schools, changes at this macro level have not necessarily resulted in effective collaboration (Brandel

¹ See Bishop *et al.* (2016, 2017) for further details of how this group is classified in relation to other types of speech, language and communication needs.

et al. 2011; Glover *et al.* 2015). Our knowledge of how to facilitate IPC in practice remains limited. In this paper, we report the findings of an integrative review of the literature across speech and language therapy and education, in which we examined the evidence for a shared understanding about children with DLD, identified as a critical facilitator of effective IPC. We also explore the implications of the findings for practice.

Inter-professional collaboration occurs when, “two or more individuals from different professional backgrounds with complementary skills interact to create something that none had previously possessed or could have come to on their own” (World Health Organization 2010, p. 36). The desired outcome of IPC is, “collaborative advantage,” or the possibility of creating something new collectively than that which is achieved when each professional works alone (Vangen and Huxham, 2013; World Health Organization 2010).

Effective IPC is considered particularly important in meeting the needs of children with DLD in school because of the role of language in learning. Most activities undertaken in the classroom require an ability to follow instructions and to formulate sentences but many children with DLD have difficulty with both (Dockrell and Lindsay 1998). Further, such difficulties are pervasive - that is, they negatively impact on the development of other skills. The child with DLD is more likely to struggle to learn to read and spell (Lindsay and Strand 2016; Snowling and Hulme 2006), have difficulty in developing mathematical skills (Cowan *et al.* 2005; Donlan *et al.* 2007; Durkin *et al.* 2013) and in developing social competence (McCabe and Meller 2004). By working effectively together to plan and

deliver supports, SLTs and teachers have the potential to address barriers to learning in school and ultimately to improve language, literacy and educational outcomes for children with DLD (Archibald 2017; Starling *et al.* 2012; Throneburg *et al.* 2000).

However, IPC is a complex phenomenon and collaborative advantage is difficult to achieve (Zwarenstein and Reeves 2000). To date, researchers have focused mainly on identifying the essential determinants of effective IPC. These include factors related both to the organisation and to the individual. In a review of the special education literature, Hernandez (2013) described organisational factors, such as the extent to which IPC is formalised within school policy and procedures, supportive leadership and the allocation of additional protected time, as essential. Similar factors have been identified in the speech and language therapy literature (McCartney 2010; McKean *et al.* 2017).

At the level of the individual practitioner, positive self-efficacy (a belief that you can change your own practice) and openness and a willingness to take risks have been identified as important (Huxham and Vangen 2001; McKean *et al.* 2017). Strong communication and negotiation skills are also seen as essential (McKean *et al.* 2017; Reeves *et al.* 2007; Suter *et al.* 2009). Conversely, power imbalances between those involved have a negative influence on IPC (Chung *et al.* 2012; Fox and Reeves 2015).

According to Hudson (2007) however, even when many of the above factors are present, effective IPC is still not guaranteed and a more likely result is, “collaborative inertia.” He and others have proposed that if we are

to develop effective ways of facilitating IPC, we need to develop our understanding of the process at the micro level; that is, at the level of interaction between the individuals (D'Amour *et al.* 2008; Hudson 2007; Huxham and Vangen 2001; Johnson *et al.* 2003; Xyrichis and Lowton 2008).

Many researchers of IPC discuss the importance of those involved being able to manage their differences in order to negotiate shared goals (Akkerman *et al.* 2007; D'Amour *et al.* 2005; Daley 2008; Doyle 2008; Ranade and Hudson 2003). Specific to SLTs and teachers, it has been suggested that a lack of shared language and understanding exists about DLD, which may act as a barrier to IPC (Baxter *et al.* 2009; Bishop 2014, Dockrell *et al.* 2017; Dunsmuir *et al.* 2006; McCartney 1999). While much work has been done in the last five years to address the language/terminological issues related to children with DLD (Bishop 2017, 2018), to our knowledge, perspectives about DLD in the literature across speech and language therapy and education have never been fully explored.

Aims, assumptions and methodological choices

We examined the literature, as one source of data, to ascertain the extent to which a shared understanding exists between speech and language therapy and education about DLD and/or how these children's needs can be met. A greater understanding of areas of commonality and difference would allow some preliminary hypotheses about the ways in which IPC between SLTs and teachers may need to be supported.

Underpinning this study are key assumptions about 'pathway(s) of influence' between academic knowledge and practice (Barley *et al.* 1988).

We acknowledge that academics and practitioners operate within two separate but interdependent social systems, but take the position that these are not reciprocal. Rather, in this study we posit that the dominant pathway/direction of influence is from research (empirical knowledge developed by scholars) to practice. Thus a practitioner may be potentially influenced symbolically or conceptually, as well as in their practice, by such knowledge (Barley *et al.* 1988).

We chose to conduct an integrative review (IR) to answer our research questions for two reasons. First, this method is particularly suited to answering complex practice-based research questions as comprehensively as possible as it allows for the inclusion of disparate sources of literature (Souza *et al.* 2010). Second, the method makes explicit the need for different search strategies (systematic and/or purposive), inclusion criteria, and quality appraisal tools, depending on the sources included in the review, thereby enhancing transparency and credibility (Cooper 1982).

We chose to conduct a qualitative content analysis of the included papers. This method is used when interpreting meaning from text. It therefore allowed us to gain an insight into the perspectives within each field of inquiry and to establish whether or not a shared understanding existed. According to Hsei (2005), there are three different types of qualitative content analysis: conventional, directed and summative. For this study we conducted a conventional analysis which involves coding the texts inductively (i.e. without applying a framework or theory). Such an approach is commonly used when little is known about the topic of interest.

We followed the Enhancing Transparency of Reporting Synthesis of Qualitative research (ENTREQ) guidelines in reporting this study (Tong *et al.* 2012). The use of such guidelines ensures researchers include the necessary information for readers to fully understand and appraise the quality of a study.

Methods

Ethical approval was granted a priori for this study by the Faculty of Education and Health Sciences' Human Research Ethics Committee, at the University of Limerick, Ireland. The study protocol was registered in PROSPERO, an international prospective database of systematic reviews (reg. no: CRD42016048575).

Search strategy (empirical / theoretical papers)

To retrieve empirical and theoretical literature, we conducted a systematic electronic search. We engaged additional support from an information specialist to generate the search terms. These were informed by previous papers in the field of SLT and education and were combined with medical subject headings or terms from the thesaurus of the databases to be searched. Due to the previously-noted terminological issues affecting the population of interest, this was a lengthy process, and several iterations of these searches were run to ensure all pertinent papers were retrieved. As recommended in the ENTREQ guidelines, we include a full record of one of the database searches as an appendix at the end of the paper. Different search frames were used for each literature source. For empirical sources, a PICO (Population- Intervention-(Comparison)-Outcomes) framework was

used (Richardson *et al.* 1995) whereas for the theoretical literature a Population – Situation framework (P-I) was applied (DiCenso *et al.* 2014).

The following electronic databases were searched; Medline, PubMed, Scopus, The Allied Complementary Medicine Database, CINAHL Plus, Embase, Cochrane Library, Speech-BITE, Education Resource Information Centre, Education Full Text, Psych Articles, Psych Info, British Education Index, as well as www.google.com and www.lenus.ie. All searches were limited to peer-reviewed papers, published in English, between 2006-2016. Once the searches were complete, the first author and a second reviewer screened the abstract and title of each of the papers independently. Decisions achieved 95% agreement. Where opinions differed, a discussion took place between the reviewers to establish consensus. A third reviewer was available (Author 2) to arbitrate if consensus could not be reached.

Study eligibility criteria (empirical and theoretical)

To be included in this review, empirical studies had to meet all of the following criteria:

- Described children with a diagnosis of developmental language disorder only² (DLD)
- Related to children of primary school age³ - (5-12 years)
- Practice-orientated⁴
- Published between the years 2006 - 2016⁵

² We included papers which referred only to children with language learning difficulties where the cause is unknown. We excluded papers which referred to language difficulties associated with a known cause and those which discussed a range of speech and language needs.

³ In the UK and Ireland, children receive primary or elementary education from the ages of five to twelve in primary school (after preschool and before secondary school). The review was limited to this age group as we considered preschools and secondary schools to be very different practice contexts.

⁴ Explicitly discusses the implications of findings for practice.

- Available in English
- Peer-reviewed articles

We excluded empirical papers which were not solely focused on children with DLD such as those who discussed children with speech and language needs associated with a known cause or biological condition. We also excluded papers not available in English; and any non-peer reviewed papers. To be included in this review, theoretical studies had to meet all of the following criteria:

- Theories/ models/concepts related to meeting the needs of children with additional needs/DLD in school were presented and discussed
- Published between the years 2006 - 2016
- Available in English
- Peer-reviewed articles

Search strategy (policy/professional guidelines)

It was beyond the scope of this review to include policies/professional guidelines from all countries. Instead, we included a representative sample. We developed a sampling frame based on a published international policy review of special education needs (SEN) (Rix *et al.* 2013). In their study, Rix *et al.* (2013) categorised SEN provision as having one of three possibilities; single tracked (full or near mainstream education only), multi-tracked (two systems which complement each other) and two-track (separate mainstream and special needs schools). We have included educational policies and corresponding disability policies from two countries within each of these three categories: Canada and Finland (single

⁵ We limited our search to the last ten years as this decade reflects contemporary mores and practice.

tracked); Ireland and Scotland (multi-tracked); and Belgium and Singapore (two-tracked). We also included these countries' professional (SLT and teachers) guidelines where available. We did not set specific exclusionary criteria for disability policy documents as we were aware that such policies are not usually age or condition specific.

Quality appraisal (empirical and theoretical)

Full texts of the studies that met the above inclusion criteria were retrieved. Two reviewers (Author 1 and a third reviewer) then independently completed a quality review process. The Mixed Methods Appraisal Tool (MMAT) was applied to assess the methodological quality of empirical papers (Pace *et al.* 2012). This validated tool enables the quality of quantitative, qualitative and mixed-methods studies to be appraised, each against its own quality criteria. Studies that met fewer than two out of four criteria in the relevant section of this tool were excluded.

For theoretical papers, a quality appraisal checklist was developed, adapted from a theory analysis tool by Walker and Avant (2005). The checklist included the following: the origins and meaning of the theory; reporting quality; quality of evidence in support of argument; logical consistency and potential of contribution. To be included, theoretical papers had to achieve a minimum of one point for each of these sections.

Analysis

All papers were read by the first author. During a second reading, the following details of each paper were recorded; date of publication, title, author(s), the stated purpose/aims of the paper, which field of practice was discussed, and a summary of the topic. Fifty-nine of the sixty-four (92%)

empirical and theoretical papers included for analysis could be classified as speech and language therapy or education papers based on explicit reference to SLT or teacher/teaching assistant practice.

Author 1 then sought further information about the remaining five papers. This included details of the first author, such as institute/department/school/faculty; professional background from website profile; and previous publications. Using these criteria, four of the remaining papers were classified by Authors 1, 3 and 4. The final paper was classified based on tracked citations, as both authors were developmental psychologists and there was ambiguity as to whether they were referring to the practice of SLTs or teachers.

Policy/professional guidelines included were also classified as either 'health' or 'education.' Speech and language therapy guidelines written by speech and language therapy associations were categorised as health papers, as were disability policies published by government health departments. Policies and guidelines issued by education departments/professional associations in education were classified as education. A list of included papers is provided in the next section.

We followed a process of double-coding as described by Toye *et al.* (2014). Line-by-line coding of one randomly-selected paper from the field of inquiry of speech and language therapy and one from education was undertaken by Author 1. The same papers were then independently coded by a third researcher, who had experience of undertaking qualitative research but was neither a teacher nor an SLT. Coding decisions were then discussed between the two coders until agreement was reached. Two more

papers were then selected and coded in the same way. When eight papers had been double-coded, there was good concordance between coders, so Author 1 continued to code the remaining papers.

The final open codes were transferred to an N-Vivo database to enhance the transparency and traceability of the analysis and to enable efficient mapping of concepts and clear visualising of the data. The next stage involved grouping open codes into “higher order” codes using visual maps of the data, enabling relationships between the categories and codes to be further explored and refined. At each level of analysis, codes and categories were also presented by Author 1 to Authors 2, 3 and 4, with the supporting data, for further discussion before finalising.

Results

Search results

Results of the search strategy for theoretical and empirical papers are presented in Figure 1 using a PRISMA flow diagram (Liberati *et al.* 2009). Our initial search yielded 7,978 papers. There was a 95% inter-reviewer agreement on selection of papers by title and abstract. Discrepancies were resolved through discussion and no decisions were referred to the third reviewer. For details of the initial search results, full text retrieval and reasons for exclusion see Figure 1. Retrieved policy documents/professional guidelines (n=17) are included in the flow chart as, “additional records identified.”

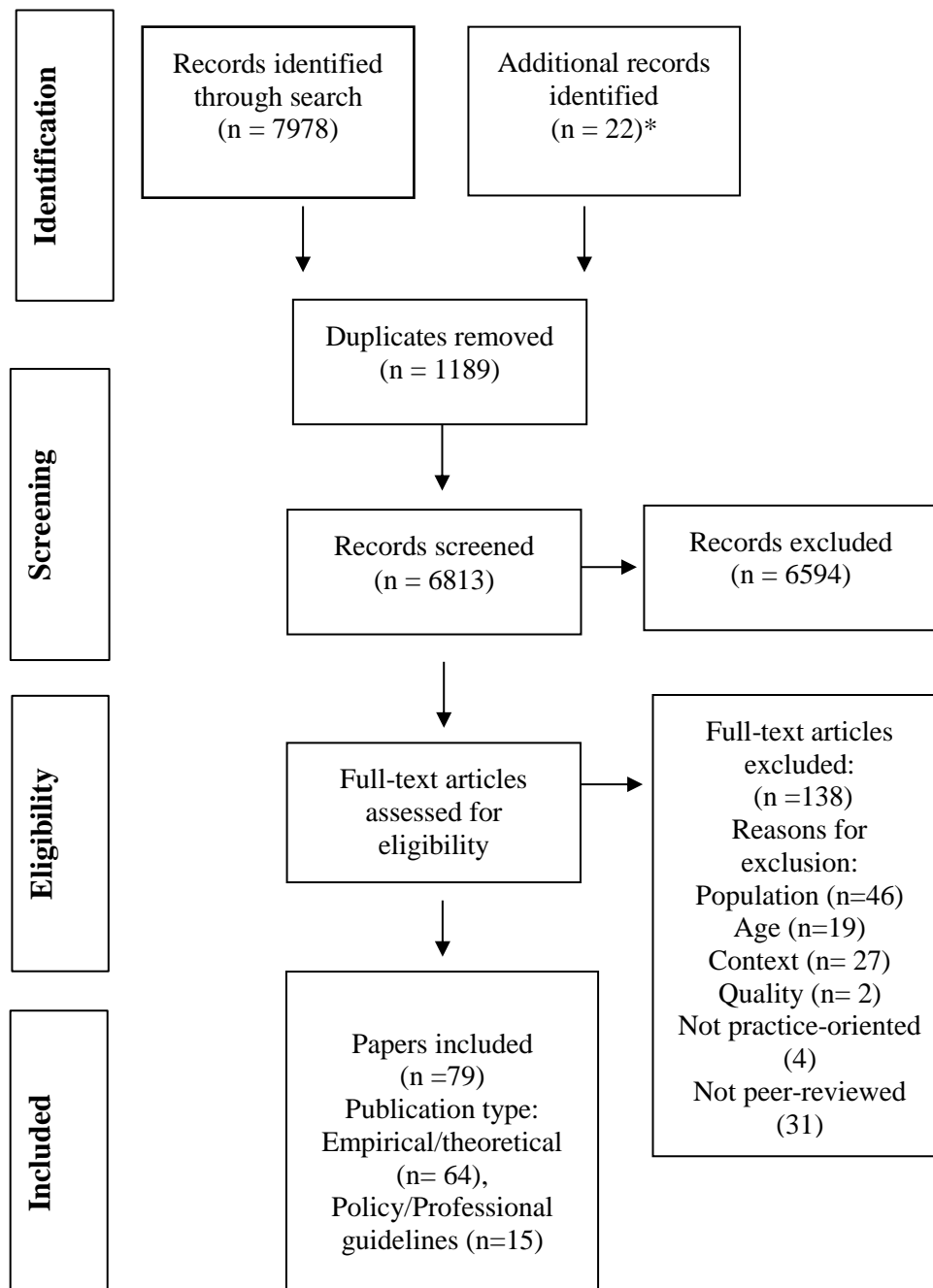


Figure 1. Results of the literature search.

For a description of the 79 papers included in the study see Table 1 and 2 below. Due to the number of papers included in the review, for readability we have referenced these by number in the text.

Table 1 *Summary of empirical and theoretical papers included in the study*

No.	Author	Title of paper	Field of inquiry	Summary of paper
1	Bishop (2014)	Ten questions about terminology for children with unexplained language problems	SLT	Discusses diagnostic criteria and terminological issues related to DLD
2	Bishop et al (2009)	Identifying language impairment in children: Combining language test scores with parental report	SLT	Aims to establish the sensitivity of psychometric testing
3	Bishop et al. (2006)	Resistance of grammatical impairment to computerized comprehension training in children with specific and non-specific language impairments	SLT	Aims to establish the efficacy of computerised intervention for improving language comprehension
4	Black-Hawkins (2010)	The framework for participation: A research tool for exploring the relationship between achievement and inclusion in schools	Education	Presents a framework for facilitating the participation of children with additional needs in school.
5	Botting et al. (2015)	The importance of natural change in planning school-based intervention for children with Developmental Language Impairment (DLI)	SLT	Explores natural change and response to intervention in school-aged children with DLD
6	Bowyer-Crane et al. (2008)	Improving early language and literacy skills: differential effects of an oral language versus a phonology with reading intervention	Education	Compares the efficacy of two approaches on literacy and language skills
7	Climie et al (2016)	A renewed focus on strengths-based assessment (SBA) in schools	Education	Provides an overview of SBA and suggests ways of supporting the implementation of such an approach
8	Cirrin et al (2008)	Language intervention practices for school-age children with spoken language disorders: a systematic review	SLT	Appraises the evidence of the efficacy of interventions for children with language disorders

No.	Author	Title of paper	Field of inquiry	Summary of paper
9	Cirrin et al. (2010)	Evidence-based systematic review: Effects of different service delivery models on communication outcomes for elementary school-age children	SLT	Examines evidence in support of the effectiveness of speech and language therapy service models to schools
10	Danforth et al (2015)	This new field of inclusive education: Beginning a dialogue on conceptual foundations	Education	Describes conceptual differences between inclusive and special education
11	Dean et al. (2006)	Comparison of ecological validity of learning disabilities diagnostic models	Education	Discusses child-centred diagnostic model versus relative achievement discrepancy & RTI
12	Dethorne et al. (2006)	Language abilities and nonverbal IQ in children with language impairment: Inconsistency across measures	SLT	Examines the extent to which language abilities are associated with nonverbal IQ in children with LI
13	Dockrell et al. (2006)	Educational provision for children with specific speech and language difficulties: perspectives of SLT service managers	SLT	Documents service managers views of factors related to service delivery for children with DLD
14	Dollaghan (2011)	Taxometric analyses of specific language impairment in 6-year-old children	SLT	Explores whether language impairments present as a distinct category
15	Ebert et al. (2009)	Non-linguistic cognitive treatment for primary language impairment	SLT	Explores the efficacy of treatment targeting auditory processing on language outcomes
16	Feeney et al. (2012)	Health-related quality-of-life of children with speech and language difficulties: A review of the literature	SLT	Appraises the evidence for poor quality of life scores in children with DLD
17	Finestack et al. (2009)	Evaluation of a deductive procedure to teach grammatical inflections to children with language impairment	SLT	Compares outcomes of an inductive versus deductive instructional approach to grammar.
18	Fletcher et al. (2009)	Response to intervention: preventing and remediating academic difficulties	Education	Challenges of the scaling up of “response to intervention” models in and across schools
19	Florian et al. (2011)	Exploring inclusive pedagogy	Education	Describes inclusive practices in schools in the UK

No.	Author	Title of paper	Field of inquiry	Summary of paper
20	Fuchs et al. (2010)	The "Blurring" of special education in a new continuum of general education placements & services	Education	Critiques US education policy (IDEA versus NCLB) and discusses implications for practice
21	Gillam et al. (2008)	The efficacy of Fast For Word language intervention (RRW-LI) in school-age children with language impairment: A randomized controlled trial	SLT	Compares language & auditory processing outcomes for children with DLD following FFW language intervention
22	Gillam et al. (2012)	Language outcomes of contextualized & decontextualized language intervention: results of an early efficacy study	SLT	Compares outcomes from two different language interventions and a control group
23	Gomersall et al. (2015)	Measuring quality of life in children with speech & language difficulties: a systematic review of existing approaches	SLT	Reviews the literature regarding the use of Quality of Life tools in research for children with DLD
24	Grigorenko (2009)	Dynamic assessment and response to intervention: Two sides of one coin?	Education	Conceptual similarities and differences between RTI and DA are discussed
25	Hasson et al. (2010)	Dynamic assessment of children with language impairments: A pilot study	SLT	Describes a pilot study in which DA is used to assess expressive grammar
26	Hasson et al. (2007)	The case for Dynamic Assessment in speech and language therapy	SLT	Discusses the origins & benefits of DA for the field of SLT
27	Hoffman et al. (2011)	Concurrent & construct validity of oral language measures with school-age children with SLI	SLT	Investigates the psychometric properties of widely used oral language measures
28	Joffe et al. (2007)	Comprehension problems in children with language impairment: Does mental imagery training help?	SLT	Compares outcomes in literal & inferential comprehension as a result of visual imagery training
29	Karpov et al. (2009)	Dynamic assessment: Progress, problems, and prospects	Education	Discusses conceptual issues relation to dynamic assessment
30	Kauffman (2007)	Conceptual Models and the Future of Special Education	Education	Compares law & medical models & their implications for special education

No.	Author	Title of paper	Field of inquiry	Summary of paper
31	Kauffman et al. (2007)	Making sense in education: Pretense (including No Child Left Behind) and realities in rhetoric and policy about schools and schooling	Education	Critiques assumptions underpinning current education policy in the USA that conflict with the idea of education as an applied science.
32	Kouri et al. (2006)	Comparison of meaning and grapho-phonemic feedback strategies for guided reading instruction of children with language delays	SLT	Compares two feedback approaches in guided reading tasks for children with SLCN
33	Kozulin (2011)	Learning potential and cognitive modifiability	Education	Discusses the relationship between thinking & learning
34	Lebeer et al. (2012)	Re-assessing the current assessment practice of children with special education needs in Europe	Education	Describes assessment approaches to learning & impact on participation in school
35	Levy et al. (2009)	Treatment of syntactic movement in syntactic SLI: A case study	SLT	Describes an explicit approach to the treatment of grammar in a school-aged child with DLD
36	Lindsay (2007)	Educational psychology and the effectiveness of inclusive education/mainstreaming	Education	Explores the tensions between inclusive education & meeting the individual needs of children
37	Marks et al. (2010)	Narrative-based intervention for word-finding difficulties: a case study	SLT	Describes the outcomes of a narrative-based treatment in improving word-finding & naming
38	Maul et al (2014)	Embedding language therapy in dialogic reading to teach morphologic structures to children with language disorders	SLT	Explores the efficacy of embedding language therapy in dialogic reading
39	McArthur et al. (2008)	Auditory processing deficits in children with reading & language impairments: Can they (& should they) be treated?	SLT	Evaluates outcomes of reading, spelling & spoke language skills following auditory processing intervention
40	McCartney et al. (2010)	Developing a language support model for mainstream primary school teachers	SLT	Describes a model for use in the classroom for teachers delivering language learning activities
41	McCartney et al. (2011)	Indirect language therapy for children with persistent language impairment in mainstream primary schools: outcomes from a cohort study	SLT	Explores the outcomes of an indirect programme of SLT when implemented by education staff in schools

No.	Author	Title of paper	Field of inquiry	Summary of paper
42	Mecrow et al. (2010)	An exploratory trial of the effectiveness of an enhanced consultative approach to delivering speech & language intervention in schools	SLT	Evaluates the effectiveness of a model of SLT to schools
43	Nash et al. (2006)	Teaching new words to children with poor existing vocabulary knowledge: A controlled evaluation of the definition & context methods	Education	Investigates the effects of two approaches to vocabulary learning in school-aged children with low language levels.
44	Newman et al. (2006)	Teachers & laypersons discern quality differences between narratives produced by children with or without SLI	SLT	Discusses implications for SLT practice of teacher/lay person's ability to identify children with SLI based on their narrative skills
45	Norbury et al. (2013)	Difference or disorder? Cultural issues in understanding neurodevelopmental disorders	SLT	Explores issues related to diagnosis of DLD & other developmental disabilities.
46	Pameijer (2006)	Towards needs-based assessment: Bridging the gap between assessment and practice	Education	Discusses "medical model" versus a "problem-solving" approach to assessment & intervention
47	Phillips (2014)	Promotion of syntactical development & oral comprehension: development & initial evaluation of a small-group intervention	Education	Explores the feasibility & potential efficacy of treatment for grammar & vocabulary for children with DLD
48	Purse et al. (2013)	Does formal assessment of comprehension by a speech and language therapist agree with teachers' perceptions of functional comprehension skills in the classroom?	SLT	Discusses implications of correlation between teacher observations & standardised measures of language comprehension for speech and language therapy practice
49	Reilly et al. (2014)	Terminological debate over language impairment in children: forward movement and sticking points	SLT	Contributes to debate in the literature about the use of terminology & criteria re children with DLD
50	Rice et al. (2016)	Specific Language Impairment, Nonverbal IQ, attention deficit disorder, autistic spectrum disorder, cochlear implant, bilingualism & dialectal variants: Defining boundaries, clarifying clinical conditions & sorting out causes	SLT	Explores concepts related to diagnosis such as diagnostic entity, co-morbidity & causal pathways in relation to different developmental disorders

No.	Author	Title of paper	Field of inquiry	Summary of paper
51	Riches (2013)	Treating the passive in children with specific language impairment: A usage-based approach	SLT	Describes a case study of grammar intervention using a usage-based approach
52	Rix et al. (2009)	What pedagogical approaches can effectively include children with special educational needs in mainstream classrooms? A systematic literature review	Education	Examines practices which can support the inclusion & achievement of children with SEN in class
53	Schmitt et al. (2014)	Do the symptoms of language disorder align with treatment goals? An exploratory study of primary-grade students' individual education plans (IEPs)	SLT	Explores the extent to which the goals of IEPs are consistent with profile of needs based on formal assessments
54	Smith-Lock et al. (2013)	Effective intervention for expressive grammar in children with specific language impairment	SLT	Establishes the effectiveness of an intervention for grammar.
55	Smith-Lock et al. (2013)	Daily or weekly? The role of treatment frequency in the effectiveness of grammar treatment for children with specific language impairment	SLT	Compares the effectiveness of different dose frequencies of SLT in children with DLD
56	Threats (2006)	Towards an international framework for communication disorders: use of the International Classification Framework for Functioning, Disability and Health	SLT	Discusses the domains & underpinning concepts of the ICF-CY framework & the benefits of using a standardised framework for the identification of children with speech and language needs
57	Tomblin (2006)	A normativist account of language-based learning disability	SLT	Discusses assumptions regarding the identification & treatment of children with DLD
58	Tomblin et al. (2006)	The dimensionality of language ability in school-age children	SLT	Examines children's performance on language tests regarding the nature of differences in scores
59	Tommerdahl et al. (2008)	Difficulty in Specific Language Impairment diagnosis: A case study of identical twins	SLT	Examines the language profile of twins with different IQ levels
60	Westerveld et al. (2010)	Profiling oral narrative ability in young school-aged children	SLT	Discusses standardised versus criterion-based narrative assessment

No.	Author	Title of paper	Field of inquiry	Summary of paper
61	Wickenden (2013)	Widening the SLP lens: How can we improve the wellbeing of people with communication disabilities globally	SLT	Promotes a rights-based approach & engagement with macro-socio political issues in relation to the child with DLD
62	Wolter et al. (2013)	Morphological awareness intervention in school-age children with language & literacy deficits: A case study	SLT	Describes an intervention study targeting morphology for children with DLD
63	Yoder et al. (2012)	Studying the impact of intensity is important but complicated	SLT	Discusses importance of understanding dosage in SLT in relation to spacing in learning
64	Zens et al. (2009)	Effects of phonological awareness & semantic intervention on word-learning in children with SLI	SLT	Compares outcomes of different approaches to word learning in children with DLD

Table 2 *Policy/professional guidelines included in the study*

No.	Date	Country	Title of document	Policy field	Nature of document
65	2016	Belgium	Inclusion of pupils with specific developmental disorders of speech and language	Health	Professional guidelines
66	2013	Belgium	Structures of Education in Europe: Belgium - Flemish Community	Education	Professional guidelines
67	2016	Finland	The Development of Education~ National Report of Finland	Education	Policy
68	2015	Ireland	Children's disability services in Ireland	Health	Policy
69	2007	Ireland	Special educational needs, a continuum of support.	Education	Policy
70	2016	Ireland	Speech and language therapy scope of practice	Health	Professional guidelines
71	2015	Ireland	Supporting students with special educational needs in schools	Education	Guidance report/policy
72	2005	Ontario,	Education for all	Education	Policy
73	2009	Ontario,	Ontario's equity and inclusive education strategy	Education	Professional guidelines
74	2001	Ontario,	Special Education~ a guide for educators	Education	Policy
75	2004	Scotland	A manual of good practice in special educational needs	Education	Policy
76	1994	Scotland	Special Educational Needs in Scotland	Education	Policy
77	2005	Scotland	Supporting children's learning, code of practice	Education	Guidance report
78	2006	Scotland	Supporting children with speech, language and communication needs within integrated children's services	Health	Policy
79	2016	Singapore	Enabling masterplan 2017 to 2021	Health	Professional guidelines

Results of analysis

The results of our analysis are presented in two sections. The first section shows the differences in perspectives we identified in the speech and language therapy literature and the education literature about DLD and how the needs of children with DLD can be met. These differences were supported by a large number of codes from multiple papers in the sample. In section two, we present the overlaps in perspectives that we identified between the fields of inquiry. These were supported by a limited number of codes across a small number of papers.

Differences in perspectives about DLD

In Figure 2, the views which dominated the speech and language therapy literature are presented on the left and those from education on the right. These related to (i) the nature of DLD¹, (ii) assessing DLD, (iii) desired outcomes (for children with DLD); (iv) achieving outcomes and (v) the nature of intervention.

¹ As defined, the term “DLD” is not used in the education literature in relation to this population. To aid clarity in presenting our results, however, we use the term ‘DLD’ throughout.

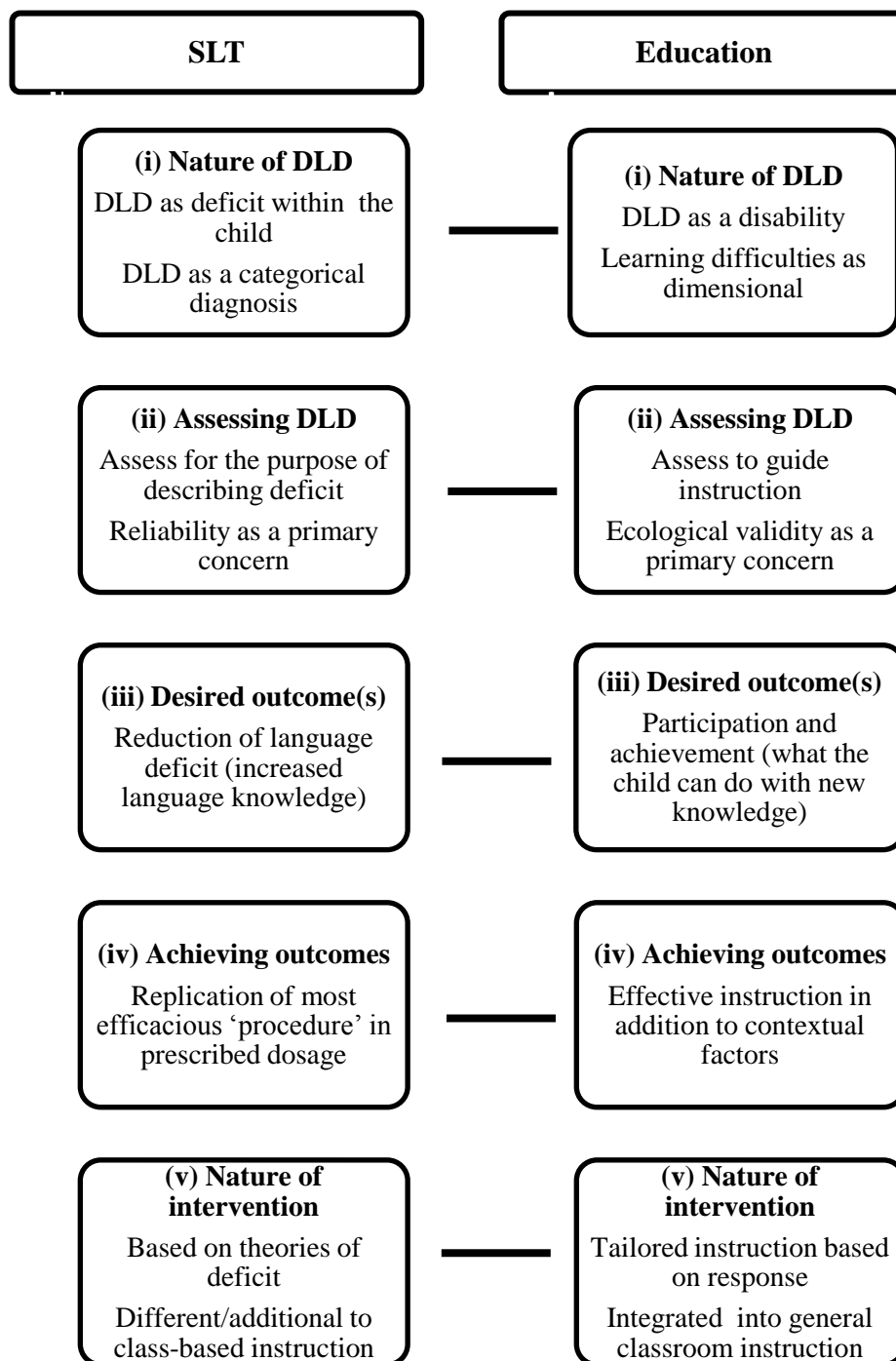


Figure 2. Key differences in perspectives between SLT and education about developmental language disorders and how these needs can be met.

The nature of DLD

In the majority of speech and language therapy papers, DLD is described as a deficit in language learning within the child. This is reflected in the terminology used when describing a child's needs- viz., “specific language *impairment*” [2, 3, 5, 12, 14, 16, 21, 25, 27, 28, 32, 41, 50, 51, 54, 69], a “speech and language *deficit*” and a “*speech-language disorder*” [8, 38, 35, 61, 62, 65]. In these papers, a categorical view (that there are biological boundaries between the child with DLD and those who have other developmental diagnoses and/or typically-developing skills) is implicit. Children are therefore categorised based on whether or not they have a diagnosis of DLD [3, 8, 9, 15, 35, 21, 22, 28].

By contrast, in the education literature analysed, such difficulties are referred to more broadly as a, “learning disability” [4, 7, 11, 13, 18, 20, 31, 74] or a, “special educational need” [52, 75, 75, 71]. DLD is classified, along with other unexplained problems such as difficulties in developing literacy or numeracy skills. This application of terminology suggests a different focus – one that identifies the environment in which a child functions (e.g., the classroom) and how this may influence a child's ability to learn. Indeed the most frequent topics in the education literature related to ways in which adjustments can be made to the classroom setting, instruction and/or curriculum to better support the learning of children with DLD [4, 10, 11, 18, 19, 20, 52, 62, 69, 73].

In the education literature analysed, the negative implications of categorising or labelling the child solely based on their deficit(s) are explicitly discussed. Specifically, the concept of “deterministic thinking” is

referred to in several papers [19, 20, 34, 46] where low teacher expectations, based on such approaches, have limited a child's opportunities to progress. In this literature children are understood to vary in their ability to master different skills and their abilities are on a continuum [18, 20, 24, 31, 72, 76]. The needs of children will overlap in various combinations in the classroom and it is these areas of overlap or commonality that are key when deciding how best to support a child's learning [10, 11, 19, 71].

In the speech and language therapy literature analysed, language is described in its component parts, separate from the context in which it naturally occurs, using standardised measures. Such components include grammar [3, 17, 35, 47, 51, 59], morphology [62], narrative skills [37, 44, 60], vocabulary [64], comprehension (understanding of language) [3, 28, 48] and expression (use of language) [8]. Assessment provides a detailed profile of the specific areas of language which are impaired in the child and these findings are used to guide intervention [65].

Assessing DLD

In the education literature, assessing a child in order to develop an individual profile of their deficit(s) is not considered to be useful for making decisions about intervention. In this literature, assessment and instruction are discussed, not as separate activities/tasks, but as part of the same ongoing process, each continually informing the other [11, 18, 24, 29, 46]. Reliability is of primary concern in the speech and language therapy literature when measuring language and "objective" data are sought. In the majority of papers, psychometric testing is used to measure the degree of language deficit as well as to measure changes in language skills after

intervention [3, 12, 15, 17, 21, 22, 28, 35, 37, 38, 39, 47, 51]. Psychometric measures are also used to make a judgement about the reliability of information sourced from elsewhere (such as from teachers) and to determine the reliability of new assessment techniques [2, 25, 48].

In the education literature by comparison, it is the ‘ecological validity’ of assessment methods which is of primary concern - viz., how well a tool or an approach reflects “real life” learning in context - and how it might inform or direct instruction. Assessment approaches are reviewed for their validity [11, 18, 24, 46]. As such, psychometric testing in education is considered to have poor validity and to be of limited use in guiding decisions about instruction [11, 18, 24, 29].

In comparison with the sample of papers from speech and language therapy, a broader range of assessment techniques and approaches are discussed in education. These include, “dynamic assessment” - an approach that ascertains a child’s learning potential by focusing on the process of learning [24, 29]; “strengths-based assessment,” - an approach to where data about the relative strengths of a child are gathered, which can be used to motivate learning and leverage change in areas of difficulty [7, 18, 34, 77], and “unstructured observation” - observation without an a priori hypotheses about the child’s functioning [19, 20, 75, 74].

Alternative methods of establishing a child’s rate of progress in response to intervention in the classroom are also described. These include, “relative achievement discrepancy” (judging the child’s performance against the performance of peers who have been exposed to same instruction) and

“curriculum-based measurement” (outcome measurements, which are informed by curriculum-based competencies) [11, 24, 31].

Desired outcomes

In the speech and language therapy literature, a reduction in the severity of the child’s language deficit is the most frequently measured outcome [3, 8, 9, 15, 17, 21, 28, 35, 37, 47]. Favourable outcomes are considered to be achieved when there is a significant demonstrable improvement in the degree of the deficit. A central focus of intervention is to reduce the differences between the language skills of the child with DLD and their typically-developing peers.

By contrast, a broader range of outcomes is discussed in education. These include outcomes that positively impact on the child’s life and those which equip the child for life, as well as other typical educational and learning outcomes. One such outcome, much discussed in education, is *participation* in the context of the classroom and society more generally [4, 75, 73, 69, 77, 67] where a favourable outcome is achieved when a child can demonstrate the use of new knowledge and/or skills in “real life” contexts, such as in the classroom [11, 20, 74].

Achieving desired outcomes

Studies that aim to establish the efficacy of speech and language therapy procedures dominate the sample of speech and language literature included in the review. In these studies, nuisance variables that might influence outcomes are controlled for, in order to establish the efficacy of specific procedures [3, 8, 9, 17, 21]. Once a technique or intervention shows promising effects under ideal experimental conditions, the technique

may then be applied in “routine” conditions - that is, in clinical practice. The desired outcome for a child (a reduction in the degree of language deficit) is best achieved by replicating these previously-tested procedures in a proven prescribed “dosage” or frequency [8, 9, 60].

In the education literature by contrast, there is discussion that the instruction itself constitutes just one of a multiplicity of contextual factors which need to be taken into account to ensure the child with DLD can achieve and participate fully [4, 10, 19, 20]. Such contextual factors are guided by the principles of, ‘inclusive education’ [4, 10, 52, 73, 77, 71]. Examples include the optimal “culture” of the classroom - viz., the values and ethos of the classroom community (including the values the teacher brings) and the relationship between the teacher and the child.

The predominant concern about the culture of the classroom is how inclusive is the environment for a child with DLD. Principles underpinning inclusive practices for the teacher are discussed, such as “presuming competence” - underpinning practice with an assumption that all children can understand and contribute fully, regardless of their needs; “moral equality” - that all children are equally valued, and “democratic community” - one which intentionally “pursue(s) freedom and equality for all” [10, 11, 19]. Examining how effectively the child with DLD is included is necessary to ensure a child can achieve and participate.

In order for the classroom culture to be inclusive, everyone who works with a child with DLD needs to be aware of their own cultural assumptions and beliefs, such as those related to difference and diversity, and how these might include, or exclude, a child with DLD [4, 19, 73]. The

degree to which a teacher is responsive to the child with DLD is discussed as an important factor in enabling the child with DLD to succeed. Principles that guide such relationships and interaction include the “ethic of caring” - the importance of supportive, caring relationships in the school life of the child; “motivational displacement,” - the teacher being fully responsive to the child; and “engrossment” - that the child feels completely heard at a particular moment in time when interacting with the teacher [10, 19, 20].

Nature of intervention

Differences are also evident about the nature of interventions. In the speech and language therapy literature, interventions are developed from theories of how language is acquired and/or theories of deficit - that is, from accounts of why it is that children fail to learn language [3, 15, 17, 21, 28, 35, 37, 39]. These are highly abstract, formalised, representations of language acquisition.

In the education literature, however, there is scepticism about the abstract nature of such theories and how useful they are in guiding practice and/or in achieving best outcomes [10, 11, 18]. Although not addressing theories specifically related to language acquisition, there is an assertion that many efforts to explain “what is wrong” do not necessarily result in improved learning outcomes for the child.

From the speech and language papers, the most effective interventions to remediate a child’s language deficits are *individualised* (they target the deficits of the individual child) and *specialised* (delivered by someone with specialised knowledge and skills in treating language deficits). This is explicitly discussed by Smith-Lock et al. (2013b).

In the education literature by contrast, there was an expressed belief, guided by equality legislation, that intervention for children with DLD should not be considered ‘additional to’ or ‘inherently different from’ the instruction of the general classroom, but rather they should be integrated within classroom instruction. This may be achieved by instruction that is guided by principles of accessibility such as “universal design for learning” which enables individual learning differences to be accommodated [11, 18, 19, 20, 31, 34, 46, 75, 73, 74, 69].

A shared understanding about DLD

Figure 3 has a similar layout to Figure 2, with the addition of a central column to represent the shared perspectives identified from the literature. In this centre column, broken and unbroken lines represent the degree to which such perspectives are shared. The concepts or concerns present in the speech and language therapy literature which are consistent with those in the education literature are represented by arrows directed from left to right, and vice versa.

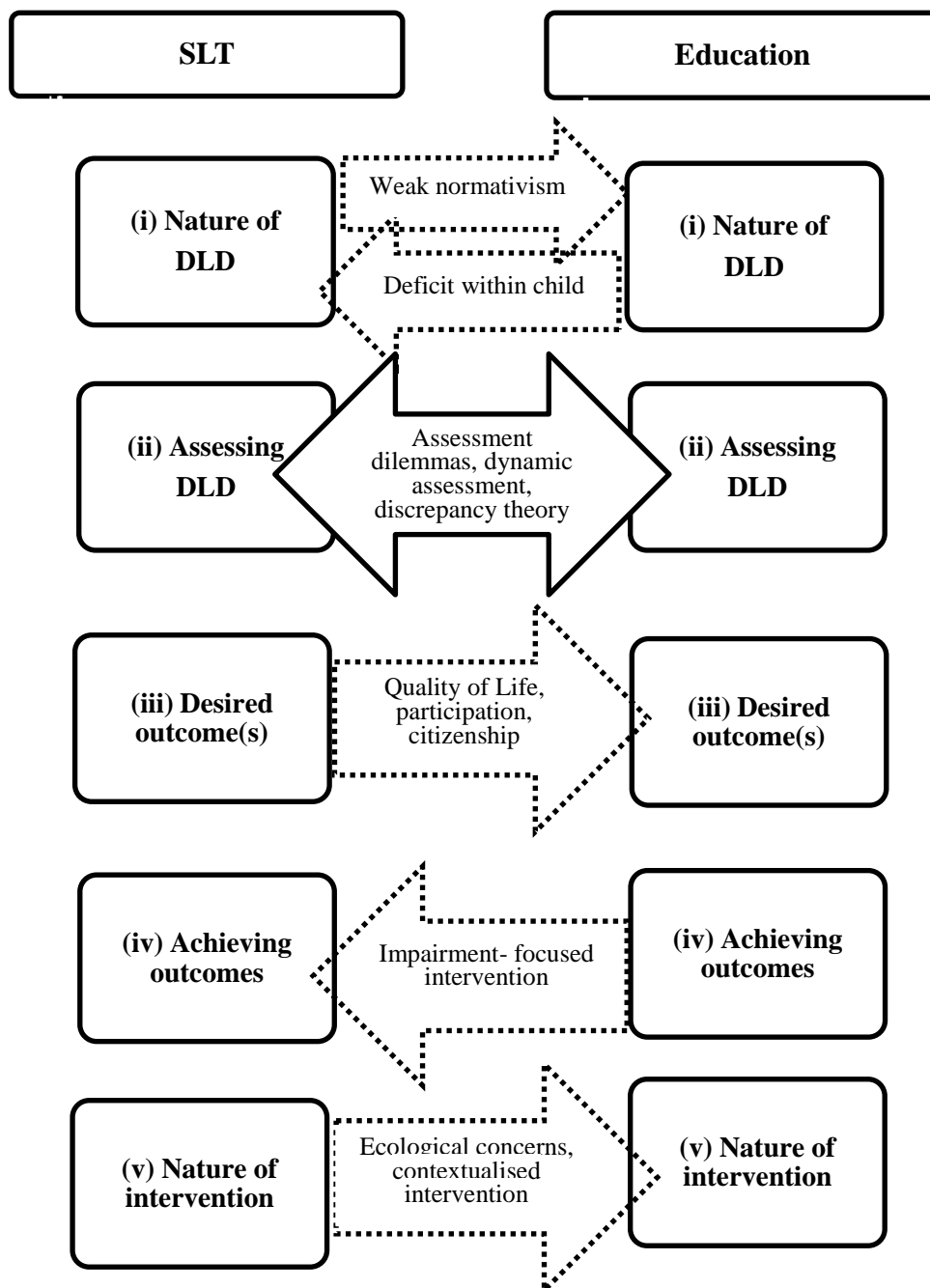


Figure 3. Shared understanding between SLT and education about developmental language disorders and how these needs can be met.

Nature of DLD

In the speech and language therapy literature, two authors questioned whether DLD should be seen from a purely “neutralist” position – that is, as a “pathology,” free from cultural influences - or whether a “normative” position should be adopted - that DLD is culturally-defined [45, 62]. A “weak normative” position was advocated by Tomblin (2006) who acknowledged the importance of considering the cultural context when describing the needs of children with DLD. This is more aligned with the dominant view in education that the environment contributes to determining what constitutes a disability.

Assessing DLD

The validity of conceptualising DLD as a distinct diagnostic category is investigated in the SLT literature [14, 50, 63]. Findings suggest that language difficulties may be better conceptualised as multi-dimensional - a position more compatible with the dominant view in education.

In the education literature, there is an acknowledgement that some children (such as those with DLD) will under-achieve, even when all possible causes have been excluded. These children are referred to as “unexpected under-achievers” [19, 36] and for such children, an investigation of their individual difficulties is required. This thinking is aligned more with the prevailing view in the SLT literature about the importance of understanding the underlying deficits within a child.

In relation to the assessment of DLD, we identified shared dilemmas, a shared conceptual understanding of dynamic assessment, and an agreed position about the use of discrepancy theory in the identification

of children with DLD. In the SLT literature there is a concern about the validity of psychometric testing [2, 5] and an awareness that data gathered from such testing are of limited use in guiding intervention [25, 26]. Conversely, in the education literature, there is an acknowledgement that, to understand the needs of “unexpected under-achievers,” psychometric testing *can* have a role, provided that the purpose and the limitations of such testing are acknowledged [18, 30, 75].

A shared conceptual understanding is evident with regards to “*dynamic assessment*” (DA) and there is agreement that such a technique has the potential to guide practice. In two SLT papers, the technique was discussed as a useful technique for assessing specific areas of language [25, 26]. Finally, the lack of empirical evidence in support of the use of discrepancy scores (differences on I.Q. tests compared with test scores assessing other skills) as a means of identifying children is acknowledged in both sets of literature [1, 22, 12, 18].

Achieving desired outcomes and the nature of intervention

Desired outcomes, how best to achieve these, and the nature of intervention, all had areas of overlap in the literature. In a small number of speech and language therapy papers, authors express frustration about the nature of the outcomes that are typically considered a priority by SLTs. Wickenden (2013), for example, made a plea to consider ways in which those with communication disabilities can be supported to contribute fully in society. She discusses the importance of concepts such as “personhood” and “citizenship” in relation to outcomes, if the lives of those with communication disabilities are to be improved. In two further studies from

SLTs the importance of measuring outcomes more broadly are discussed - that is, the need to consider the wider impact of DLD on a child's quality of life [16, 23]. Of particular relevance, Feeney et al. (2012) discussed "*school functioning*" - the degree to which a child can participate in school- as being an important measure of outcome [16]. Such a perspective is aligned with those in the education literature about desired outcomes.

In terms of how best to achieve favourable outcomes for the child with DLD, the views of two authors from the education literature demonstrated alignment with the dominant position evident in the SLT literature in the review. While acknowledging the importance of protecting the rights of those with disabilities, these authors assert the need to balance these rights with the delivery of educational provision that is effective for individual children with DLD [30, 31, 36]. Lindsay (2007), for example is concerned that, even when methodological issues are taken into account, there is a lack of empirical evidence of improved outcomes for the individual child with DLD as a result of inclusion. Kauffman (2007) also discusses the implications of two different approaches to meeting the needs of such children - one which is underpinned by the assumptions of medicine and another by assumptions of law. He concluded that a medical approach was more likely to result in improved outcomes for that child [30].

A final point relates to awareness in the speech and language literature of the need to develop interventions that take into account the context of the classroom, the school and/or the curriculum. Gillam *et al.* (2012) for example, set out to compare the effectiveness of two interventions; one which was "contextualised" (informed by the curriculum)

and a second, described as “de- contextualised,” that was not. McCartney *et al.* (2010) developed a framework for teachers, to increase opportunities for language learning in the classroom and Botting *et al.* (2015) evaluated an intervention package that was implemented school-wide.

Discussion

Inter- professional collaboration is a common policy goal across health and education as a means of ensuring that children with additional needs can participate and achieve in school. A shared understanding has been identified as important, if professionals are to collaborate effectively together. We undertook a comprehensive analysis of empirical, theoretical and policy papers to gain an understanding of the ways in which perspectives about the needs of children with DLD in the literature between speech and language therapy and education were aligned, and where they differed.

In our study, the following commonalities from the two literature sets were identified; an interest and awareness in the speech and language therapy literature about the context of the classroom; some shared dilemmas about assessment, a shared conceptual understanding about dynamic assessment as a means of informing intervention, and agreement regarding the (mis)use of discrepancy criteria when identifying children with DLD. A shared understanding was evident in a small number of the education papers with those from SLT about the importance of measuring the efficacy of instruction when working with children who have special educational needs. However, we also found many differences in perspective. These included how DLD is conceptualised, how the needs of children with DLD can be

assessed, what are desired outcomes for this population, and how such outcomes can best be achieved. We have mapped these key differences according to the International Classification of Functioning, Disability and Health (ICF) developed by the WHO (2002), before exploring the possible implications of these differences for IPC. The ICF offers a standard approach to describing an individual's health condition and their associated functioning. It includes four domains: *Body Structure and Function*, *Activity*, *Participation*, and *Contextual factors* (environmental and personal). In Figure 4, we highlight the dominant domains from the speech and language therapy literature analysed in bold black and those from the education literature in grey. We also show any strong and weak connections that we found between the domains, within and across the fields of inquiry.

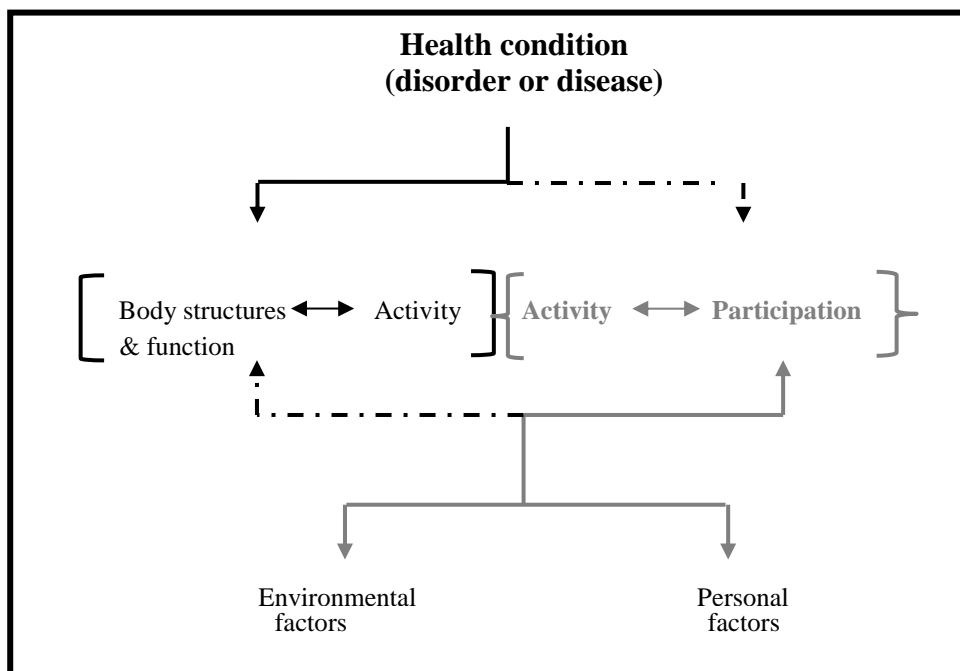


Figure 4. Key findings of the study mapped to the domains of ICF (World Health 2002).

In the speech and language therapy literature, DLD is viewed as a health condition. There is a strong focus on understanding the ways in which DLD differs from other diagnostic categories and/or accounting for the ways in which the cognitive functions for language might be impaired. Interventions are developed to remediate such impairments in language function. Implicit in this literature is the assumption that understanding the deficit within the child is key before effective intervention can be delivered. Norwich describes this approach as, “diagnostic – education program planning” (Norwich 2009).

By contrast, a main concern in the education literature relates to how *environmental factors* (the classroom setting and classroom instruction) can be adapted to minimise the impact of any factors which might act as a barrier to a child’s learning. There is limited reference to diagnostic categories, apart from warnings of the dangers of categorising children based on these. From the education literature, the purpose of assessment is not to diagnose, but to guide decisions about adaptations which may be required to the classroom environment. Preferred methods of assessment are therefore those which are context-bound. When assessing, it is the scaffolding that is put in place and the child’s response to this which is of interest. Such processes are typically controlled for when making a diagnosis of DLD.

While both fields of inquiry are concerned with limitations in *activity*, there are differences in how such limitations are judged. In the speech and language therapy literature, activity was primarily described in terms of (poor) performance on specific language tasks, whereas in

education a judgement is made based on activities related to the curriculum and/or a child's participation within the classroom. Participation is a central concern in the education literature analysed, where the concept has been fully operationalised and a tool has been developed to guide research and practice. While participation is referred to as a desired outcome in a limited number of policy and theoretical papers, it is not an outcome measured in intervention studies in the speech and language therapy literature.

Implications for inter-professional collaboration

Three potential implications for SLTs and teachers when collaborating in school to meet the needs of children with DLD are discussed. The first relates to navigating “dilemma(s) of difference,” the second to “negotiating shared outcomes,” and the third is “what constitutes knowledge to guide practice.”

In the speech and language therapy literature, the dominant focus is *seeking to understand difference* versus the education literature where *adapting the environment to the benefit of all children* is key. This may embody the “dilemma of difference” first described by Minow (1985) and Norwich (2009) about how the individual learning/ language needs of a child can be identified and support planned, without setting a child apart from their peers. The identification of differences between the child with DLD and their peers may allow interventions to be delivered that are tailored to these individual needs. However, by identifying/labelling a child based on their difference(s), there is a risk that child may become stigmatised and segregated from their peers in school. Seeking similarities between the child with DLD and their peers on the other hand (a dominant

perspective in education) facilitates inclusive practices in the classroom - but the effectiveness of such approaches for the child with DLD, according to some, has not been fully demonstrated (Lindsay 2003). These differences can be traced back decades, to broader debates about medical versus social theories of disability (Kristiansen *et al.* 2008). If such a dilemma continues to be a practice reality, then, as suggested by Norwich (2009) a re-conceptualisation of SEN is required. He proposes a set of three dimensions by which children with SEN could be grouped with their peers in the classroom, which allows for both commonality and difference to be identified (Norwich 2009). Such a framework might be useful for SLTs and teachers when working together to meet the needs of children with DLD in school.

A second finding relates to differing priorities that result in a lack of shared outcomes - identified as being essential for effective IPC (D'Amour *et al.* 2005; McKean *et al.* 2017). In the speech and language therapy literature, the focus of interest was to address a child's *impairment* - viz., to show a measurable reduction of the language deficit and/or that the child has improved in language skills. In the education literature, acquiring a new skill is not necessarily valued as an outcome; the child must be able to use such a skill in curriculum-based tasks. The latter approach has an emphasis on the child's ability to convert new skills or resources into valuable functioning (aka performance) in the classroom (Sen, 1992). These differences may reflect what Tomblin (2006) describes as *differences in the values of the professions*. In SLT, language is a skill of value in its own right, and therefore if language is poor, a child is considered to require

intervention. For teachers this may not be the case, unless there is a demonstrable lack of progress on curriculum-based measures. Negotiating a shared set of outcomes likely involves generating a shared set of *values* together, in relation to a child with DLD. The findings from one case study of SLT teacher co-practice provide some support for this (McKean *et al.* 2017).

It is not sufficient for practitioners to work effectively together - their work also needs to be guided by the best available evidence. A third implication of the findings may be related to what constitutes the “best” or most “useful” evidence to guide practice. Cochran-Smith and Lytle (1999) define three different types of knowledge in relation to practice: knowledge *of* practice, knowledge *for* practice and knowledge *in* practice and each is of relevance for this paper. The focus in the speech and language therapy literature included in this review is in generating knowledge *for* practice. This focus can be traced back to the evidenced-based medicine movement, which makes explicit how clinical research should be carried out and implemented. One critique of this approach is that, in generating knowledge of this kind, there is an un-coupling of theory from practice and theory from any socio-cultural context in which it is to be applied, resulting in unintended negative consequences (Greenhalgh *et al.* 2014). When SLTs collaborate with teachers in order to optimise practice in the classroom for the child with DLD, such knowledge may not be useful due to the complex contextual factors at play in this environment. Two researchers who explored the views of teachers and/or how well SLT programmes are implemented in schools suggest that there may be a mismatch in the type of

knowledge that teachers seek and the knowledge that an SLT brings when working in schools (Dockrell and Lindsay 2001; McCartney *et al.* 2011).

We are aware that there is a considerable and burgeoning body of literature in health and education about such epistemological and/or ontological issues and it is beyond the scope of our paper to discuss these. However, we concur with Mc Cartney (2009, p 47) that if such knowledge differences exist between the practitioners then it may be ‘a very sticky sticking point indeed.’ It may be that if SLTs and teachers are to collaborate effectively then they need to generate knowledge together that “fits” with teaching and learning in the classroom - that is, knowledge *in practice*. Such knowledge could inform, as well as be informed by, empirically-tested concepts and theories.

Limitations

We may have found more commonality in the literature had we used theoretical sampling, rather than systematic searching for empirical and theoretical papers. Conversely, this systematic search strategy where search terms were explicit and searches can be verified adds to the transparency and rigour of this type of review and can be duplicated.

It was beyond the scope of this review to explore grey literature. As a result, perspectives and practices which exist in the fields of SLT and education literature related to school-aged children with DLD may have been excluded.

A further limitation of the study relates to the classification of the papers. The majority of papers were classified by the authors as ‘education’ or ‘SLT’ papers, based on the practice that was explicitly referred in the

text. For the small number of papers where this was not possible, other criteria, such as professional/academic backgrounds of authors and/or citations, were used. Such classification systems are not without error and reliability would have been improved by including a group of stakeholders in the process. However, we concur with Barley *et al.* (1988, p 28) that authors usually consider the audience they wish to influence and channel their papers accordingly and therefore we believe our classification can be justified.

A final limitation relates to terminological variance regarding DLD. Although we used many different terms and synonyms in our final search string, we acknowledge that some papers may not have been included. Despite acknowledged limitations in this paper, we have achieved what we set out to do -viz., to examine the literature, as one source of data, for evidence of a shared understanding between speech and language therapy and education about DLD and about how these children's needs can be met in school.

Conclusions and next steps

Inter-professional collaboration between SLTs and teachers has been a policy recommendation for many years when working with children with DLD in school, yet it remains difficult to achieve in practice. Researchers have proposed that one possible barrier is a lack of shared language and understanding between the fields of speech and language therapy and education.

In this paper, we report the findings of a comprehensive review of the literature which aimed to examine evidence of a shared understanding

about DLD between the fields. We found some commonality, but it was the differences in perspective which dominated. We have described the nature of these differences and explored potential implications of these for practitioners when collaborating.

Integrating perspectives from this review of the literature with those of stakeholders will allow us to determine the extent to which the findings reflect dilemmas in practice and whether a conceptual model to guide IPC between SLTs and teachers is warranted. Understanding and supporting collaboration at this micro- level is essential if speech and language services and supports for the many children in school with DLD are to be improved.

Declaration of interest

The authors report no conflicts of interest. The authors alone are responsible for the contents and writing of the paper.

References

- Akkerman, S., Van Den Bossche, P., Admiraal, W., Gijsselaers, W., Segers, M., Simons, R-J. and Kirschner, P. (2007) 'Reconsidering group cognition: From conceptual confusion to a boundary area between cognitive and socio-cultural perspectives?', *Educational Research Review*, 2, 39-63.
- Archibald, L. M. D. (2017) 'SLP-educator classroom collaboration: A review to inform reason-based practice', *Autism and Developmental Language Impairments*, 2(1), 1-17.
- American Speech - Language - Hearing Association (2010) *Roles and responsibilities of Speech-Language Pathologists in schools*, available: <https://www.asha.org/policy/pi2010-00317/> [accessed 12 October 2017].
- Barley, S. R., Meyer, G. W. and Gash, D. C. 1988 'Cultures of culture: Academics, practitioners and the pragmatics of normative control', *Administrative Science Quarterly*, 33, 24-60.
- Baxter, S., Brookes, C., Bianchi, K., Rashid, K. and Hay, F. (2009) 'Speech and language therapists and teachers working together: Exploring the issues', *Child Language Teaching and Therapy*, 25, 215-234.
- Bishop, D. V. (2014) 'Ten questions about terminology for children with unexplained language problems', *International Journal of Language and Communication Disorders*, 49(4), 381-415.
- Bishop, D. V., Adams, C. V. and Rosen, S. (2006) 'Resistance of grammatical impairment to computerized comprehension training in children with specific and non-specific language impairments', *International Journal of Language and Communication Disorders*, 41(1), 19-40.
- Bishop, D. V. and McDonald, D. (2009) 'Identifying language impairment in children: Combining language test scores with parental report', *International Journal of Language and Communication Disorders*, 44(5), 600-615.
- Bishop, D.V., Snowling, M.J., Thompson, P.A. and Greenhalgh, T. (2016) 'Catalise: A multinational and multidisciplinary delphi consensus

study. Identifying language impairments in children', *PLoS ONE*
[online], available: <https://dx.doi.org/10.1371/journal.pone.0168066>.

- Bishop, D.V., Snowling, M. J., Thompson, P. and Greenhalgh, T. (2017) 'Phase 2 of CATALISE: A multinational and multidisciplinary Delphi consensus study of problems with language development: Terminology', *Journal of Child Psychology and Psychiatry*, 58(10), 1068-1080.
- Black-Hawkins, K. (2010) 'The framework for participation: A research tool for exploring the relationship between achievement and inclusion in schools', *International Journal of Research and Method in Education*, 33(1), 21-40.
- Botting, N., Gaynor, M., Tucker, K. and Orchard-Lisle, G. (2015) 'The importance of natural change in planning school-based intervention for children with developmental language impairment (DLI)', *Child Language Teaching and Therapy*, 32 (2), 159-177.
- Bowyer-Crane, C., Snowling, M., Duff, F., Fieldsend, E., Carroll, J., Miles, J., Götz, K. and Hulme, C. (2008) 'Improving early language and literacy skills: differential effects of an oral language versus a phonology with reading intervention', *Journal of Child Psychology and Psychiatry*, 49(4), 422-32.
- Chung, V. C. H., Ma, P. H. X., Lau Chun, H. and Griffiths, S. M. (2012) 'Organizational determinants of interprofessional collaboration in integrative health care: A systematic review of qualitative studies', *PloS ONE*, 7(11), 1-9.
- Cirrin, F. M. and Gillam, R. B. (2008) 'Language intervention practices for school-age children with spoken language disorders: A systematic review', *Language, Speech, and Hearing Services in Schools*, 39 (1), 110-137.
- Cirrin, F. M., Schooling, T. L., Nelson, N. W., Diehl, S. F., Flynn, P. F., Staskowski, M., Torrey, T. Z. and Adamczyk, D. F. (2010) 'Evidence-based systematic review: Effects of different service delivery models on communication outcomes for elementary school-

age children', *Language, Speech and Hearing Services In Schools*, 41 (3), 233-264.

Climie, E. and Henley, L. (2016) 'A renewed focus on strengths-based assessment in schools', *British Journal of Special Education*, 43(2), 108-121.

Cochran-Smith, M. and Lytle, S. L. (1999) 'Relationships of knowledge and practice: teacher learning in communities', *Review of Research in Education*, 24(1), 249-305.

Conti-Ramsden, G., Durkin, K., Simkin, Z. and Knox, E. (2009) 'Specific language impairment and school outcomes. 1: Identifying and explaining variability at the end of compulsory education', *International Journal of Language and Communication Disorders*, 44(1), 15-35.

Cooper, H. M. (1982) 'Scientific guidelines for conducting integrative research reviews', *Review of Educational Research*, 52(2), 291-302.

Cowan, R., Donlan, C., Newton, E. J. and Llyod, D. (2005) 'Number skills and knowledge in children with specific language impairment', *Journal of Educational Psychology*, 97 (4), 732-744.

D'Amour, D., Ferrada-Videla, M., San Martin Rodriguez, L. and Beaulieu, M.D. (2005) 'The conceptual basis for interprofessional collaboration: Core concepts and theoretical frameworks', *Journal of Interprofessional Care*, 19 (1), 116-131.

D'Amour, D., Goulet, L., Labadie, J.-F., Martín-Rodriguez, L.S. and Pineault, R. (2008) 'A model and typology of collaboration between professionals in healthcare organizations', *BMC Health Services Research* [online], available: <http://dx.doi.org/10.1186/1472-6963-8-188>.

Daley, D. M. (2008) 'Interdisciplinary problems and agency boundaries: exploring effective cross-agency collaboration', *Journal of Public Administration Research and Theory*, 19 (3), 477-493.

- Danforth, S. and Naraian, S. (2015) 'This new field of inclusive education: beginning a dialogue on conceptual foundations', *Intellectual and Developmental Disabilities*, 53(1), 70-85.
- Dean, V. J., Burns, M. K., Grialou, T. and Varro, P. J. (2006) 'Comparison of ecological validity of learning disabilities diagnostic models', *Psychology in the Schools*, 43(2), 157-168.
- Department of Education (1994) *Special Educational Needs in Scotland*, Edinburgh: Scottish Executive, available: <http://www.Gov.Scot/Resource/Doc/158117/0042777.pdf> [accessed 5 January 2017].
- Department of Education (2005) *Supporting Children's Learning, Code of Practice*, Edinburgh: Scottish Executive, available: <http://www.Gov.Scot/Resource/Doc/57346/0016754.pdf> [accessed 13 January 2017].
- Department of Education and Science (2007) *Special Educational Needs, A Continuum of Support*, Dublin: Stationary Office, available: https://www.Education.Ie/En/Schools-Colleges/Services/National-Educational-Psychological-Service-Neps-/Neps_Special_Needs_Guidelines.pdf [accessed 10 February 2017].
- Dethorne, L. S. and Watkins, R. V. (2006) 'Language abilities and nonverbal IQ in children with language impairment: Inconsistency across measures', *Clinical Linguistics and Phonetics*, 20(9), 641-658.
- Dicenso, A., Guyatt, G. and Ciliska, D. (2014) *Evidence-based nursing: A guide to clinical practice*, St Louis, USA: Elsevier Mosby.
- Dockrell, J. and Lindsay, G., 1998 'The ways in which speech and language difficulties impact on children's access to the curriculum', *Child Language Teaching and Therapy*, 14 (2), 117-133.
- Dockrell, J. and Lindsay, G. (2001) 'Children with specific speech and language difficulties-the teachers' perspective', *Oxford Review of Education*, 27, 369-394.
- Dockrell, J., Lindsay, G., Letchford, B. and Mackie, C. (2006) 'Educational provision for children with specific speech and language difficulties: Perspectives of speech and language therapy service managers',

International Journal of Language and Communication Disorders, 41 (4), 423-40.

Dockrell, Lindsay, G., Roulstone, S. and Law, J. (2014) 'Supporting children with speech, language and communication needs: An overview of the results of the Better Communication Research Programme', *International Journal of Language and Communication Disorders*, 49(5), 543-557.

Dockrell, J., Howell, P., Leung, D. and Fugard, A. J. (2017) 'Meeting the needs of children with speech language and communication needs in England: Challenges for practice', *Frontiers in Education*, 2 (35), available: <https://dx.doi.org/10.3389/feduc.2017.00035>.

Dollaghan, C. A. (2011) 'Taxometric analyses of specific language impairment in 6-year-old children', *Journal of Speech, Language, and Hearing Research*, 54(5), 1361-1371.

Donlan, C., Cowan, R., Newton, E. J. and Lloyd, D. (2007) 'The role of language in mathematical development: Evidence from children with specific language impairments', *Cognition*, 103(1), 23-33.

Doyle, J. (2008) 'Barriers and facilitators of multidisciplinary team working: A review', *Paediatric Care*, 20(2), 26-29.

Dunsmuir, S., Clifford, V. and Took, S. (2006) 'Collaboration between educational psychologists and speech and language therapists: Barriers and opportunities', *Educational Psychology in Practice*, 22(2), 125-140.

Durkin, K., Mok, P. L. H. and Conti-Ramsden, G. (2013) 'Severity of specific language impairment predicts delayed development in number skills', *Frontiers in Psychology* [online], available: <http://dx.doi.org/10.3389/fpsyg.2013.00581>.

Ebert, K. D. and Kohnert, K. (2009). Non-linguistic cognitive treatment for primary language impairment', *Clinical Linguistics and Phonetics*, 23(9), 647-664.

Department of Education and Science (2017) *Guidelines for schools supporting children with special educational needs in mainstream schools*, Dublin: Stationary Office, available: <https://www.education>

[.ie/en/The-Department/Announcements](#)
[/Guidelines-for-Schools-Supporting-Children-with-Special-](#)
[Educational-needs-in-Mainstream-Schools.html](#) [accessed 30.06.19].

Education and Industry Department (2004) *A manual of good practice in special educational needs*, Edinburgh: Scottish Executive, available: [http://www.Gov.Scot/Publications/\(2004/02/19009/33938](http://www.Gov.Scot/Publications/(2004/02/19009/33938) [accessed 30 December 2016].

Eurydice (2017) *Belgium-flemish-community: Special education needs provision within mainstream education*, available: <https://webgate.Ec.Europa.Eu/Fpfis/Mwikis/Eurydice/Index.Php/Belgium-Flemish-Community:Special Education Needs Provision Within Mainstream Education> [accessed 2 January 2017].

Eurydice (2017) *Special education needs provision within mainstream education (Finland)*, available: <https://webgate.Ec.Europa.Eu/Fpfis/Mwikis/Eurydice/Index.Php/Finland:Special Education Needs Provision Within Mainstream Education> [accessed 4. January 2017].

Feeney, R., Desha, L., Ziviani, J. and Nicholson, J. M. (2012) 'Health-related quality-of-life of children with speech and language difficulties: A review of the literature', *International Journal of Speech-Language Pathology*, 14(1), 59-72.

Finestack, L. H. and Fey, M. E. (2009) 'Evaluation of a deductive procedure to teach grammatical inflections to children with language impairment', *American Journal of Speech-Language Pathology*, 18(3), 289-302.

Finnish Government (2007) *Preparation of the disability policy programme*, available: http://Www.Vane.To/Index.Php?Option=Com_Content&View=Article&Id=56&Itemid=49 [accessed 1 January 2017].

Finnish National Board of Education (2016) *The development of education: National report of Finland*, available: http://www.Ibe.Unesco.Org/National_Reports/Ice_2004/Finland.Pdf [accessed 2 January 2017].

Flemish Ministry of Education (2013) *Structures of Education in Belgium - Flemish community*, available: <https://www.Vlaanderen.Be/En>

/Publications/Detail/Structures-of-Education-Vocational-Training-and-Adult-Education-Systems-In-Europe-Belgium-Flemish-Community-2008 [accessed 10 March 2017].

- Fletcher, J. M. and Vaughn, S. (2009) 'Response to intervention: Preventing and remediating academic difficulties', *Child Development Perspectives*, 3 (1), 30-37.
- Florian, L. and Black-Hawkins, K. (2011) 'Exploring inclusive pedagogy', *British Educational Research Journal*, 37(5), 813-828.
- Fox, A. and Reeves, S. (2015) 'Interprofessional collaborative patient-centred care: A critical exploration of two related discourses', *Journal of Interprofessional Care*, 29(2), 113-118.
- Fuchs, D., Fuchs, L. S. and Stecker, P. M. (2010) 'The "blurring" of special education in a new continuum of general education placements and services', *Exceptional Children*, 76(3), 301-323.
- Gallagher, A. L., Murphy, CA., Conway, P.F. and Perry A. (2017) 'Examining the evidence for a shared conceptual understanding across speech and language therapy and education in meeting the needs of children with developmental language disorders in mainstream education: An integrative review', Prospero: International Prospective Register of Systematic Reviews, available: http://aww.Crd.York.Ac.Uk/Prospero/Display_Record.Php?Id=Crd42016048575 [accessed 12 Aug 2019].
- Gascoigne, M. 'Supporting children with speech, language and communication needs within integrated children's services', UK: RCSLT, available: https://www.Rcslt.Org/Members/Publications/Publications2/Supporting_Children_Within_Intergrated_Services [Accessed 10 December 2016].
- Gillam, R. B., Loeb, D. F., Hoffman, L. M., Bohman, T., Champlin, C. A., Thibodeau, L., Widen, J., Brandel, J. and Friel-Patti, S. (2008) 'The efficacy of Fast Forward language intervention in school-age children with language impairment: A randomized controlled Trial', *Journal of Speech, Language, and Hearing Research*, 51(3), 97-119.

- Gillam, S. L., Gillam, R. B., Reece, K., Nippold, M. and Schneider, P. (2012) 'Language outcomes of contextualized and decontextualized language intervention: Results of an early efficacy study', *Language, Speech and Hearing Services in Schools*, 43(1), 276-291.
- Glover, A., McCormack, J. and Smith-Tamaray, M. (2015) 'Collaboration between teachers and speech and language therapists: Services for primary school children with speech, language and communication needs', *Child Language Teaching and Therapy*, 31(3), 363-382.
- Gomersall, T., Spencer, S., Basarir, H., Tsuchiya, A., Clegg, J., Sutton, A. and Dickinson, K. (2015) 'Measuring quality of life in children with speech and language difficulties: A systematic review of existing approaches', *International Journal of Language and Communication Disorders*, 50(4), 416-435.
- Greenhalgh, T., Howick, J. and Maskrey, N. (2014) 'Evidence-based medicine: A movement in crisis?', *British Medical Journal* [online], available: <https://dx.doi.org/10.1136/bmj.g3725>.
- Grigorenko, E. L. (2009) 'Dynamic assessment and response to intervention two sides of one coin', *Journal of Learning Disabilities*, 42(2), 111-132.
- Hasson, N. and Botting, N. (2010) 'Dynamic assessment of children with language impairments: A pilot study', *Child Language Teaching and Therapy*, 26 (3), 249-272.
- Hasson, N. and Joffe, V. (2007) 'The case for dynamic assessment in speech and language therapy', *Child Language Teaching and Therapy*, 23(1), 9-25.
- Hernandez, S. J. (2013) 'Collaboration in special education: It's history, evolution, and critical factors necessary for successful implementation', *US-China Education Review*, 3(6), 480-498.
- Ho, A. (2004) 'To be labelled, or not to be labelled: That is the question', *British Journal of Learning Disabilities*, 32(2), 86-92.
- Hoffman, L. M., Loeb, D. F., Brandel, J. and Gillam, R. B. (2011) 'Concurrent and construct validity of oral language measures with

- school-age children with specific language impairment', *Journal of Speech, Language, and Hearing Research*, 54(6), 1597-1608.
- Hsieh, H.F. and Shannon, S. E. (2005) 'Three approaches to qualitative content analysis', *Qualitative Health Research*, 15(9), 1277-1288.
- Hudson, B. (2007). 'Pessimism and optimism in inter-professional working: The Sedgefield Integrated Team', *Journal of Interprofessional Care*, 21 (1), 3-15.
- Huxham, C. and Vangen, S. (2001) '*What makes practitioners tick? Understanding collaboration practice and practising collaborative understanding*', Basingstoke: Palgrave Macmillan.
- Irish Association of Speech and Language Therapists (2016) *Speech and language therapy scope of practice*, available: <http://www.Iaslt.Ie/Documents/Public-Information/Scopeofpractice.Pdf> [accessed 25 January 2017].
- International Bureau for Audiophonology (2016) *Inclusion of pupils with specific developmental disorders of speech and language* available: <https://www.Biap.Org/De/Recommandations/Recommendations/Tc-15-Inclusion/252-Rec-15-06-En-Inclusion-of-Pupils-With-Specific-Developmental-Disorders-of-Speech-and/File> [accessed 11 December 2016].
- Joffe, V. L., Cain, K. and Maric, N. (2007) 'Comprehension problems in children with specific language impairment: Does mental imagery training help?', *International Journal of Language and Communication Disorders*, 42(6), 648-664.
- Johnson, P., Wistow, G., Schulz, R. and Hardy, B. (2003) 'Interagency and interprofessional collaboration in community care: The interdependence of structures and values', *Journal of Interprofessional Care*, 17(1), 70-83.
- Karpov, Y. V. and Tzuriel, D. (2009) 'Dynamic assessment: progress, problems, and prospects', *Journal of Cognitive Education and Psychology*, 8(3), 228-237.
- Kauffman, J. M. (2007) 'Conceptual models and the future of special education', *Education and Treatment of Children*, 30(4), 241-258.

- Kauffman, J. M. and Konold, T. R. (2007) 'Making sense in education: Pretense (including no child left behind) and realities in rhetoric and policy about schools and schooling', *Exceptionality*, 15(2), 75-96.
- Kouri, T. A., Selle, C. A. and Riley, S. A. (2006) 'Comparison of meaning and graphophonemic feedback strategies for guided reading instruction of children with language delays', *American Journal of Speech-Language Pathology*, 15(3), 236-246.
- Kozulin, A. (2011) 'Learning potential and cognitive modifiability', *Assessment in Education: Principles, Policy and Practice*, 18(2), 169-181.
- Kristiansen, K., Vehmas, S. and Shakespeare, T. (2008) *Arguing About Disability: Philosophical Perspectives*, Abington: Routledge.
- Law, J., Lindsay, G., Peacey, N., Gascoigne, M., Soloff, N., Radford, J. and Band, S. (2002) 'Consultation as a model for providing speech and language therapy in schools: A panacea or one step too far?', *Child Language Teaching and Therapy*, 18 (2), 145-163.
- Lebeer, J., Birta-Székely, N., Demeter, K., Bohács, K., Candeias, A. A., Sønnesyn, G., Partanen, P. and Dawson, L. (2012) 'Re-assessing the current assessment practice of children with special education needs in Europe', *School Psychology International*, 33 (1), 69-92.
- Levy, H. and Friedmann, N. (2009) 'Treatment of syntactic movement in syntactic SLI: A case study', *First Language*, 29 (1), 15-49.
- Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gøtzsche, P. C., Ioannidis, J. P., Clarke, M., Devereaux, P. J., Kleijnen, J. and Moher, D. (2009) 'The prisma statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: Explanation and elaboration', *Plos Medicine* [online], available: <https://dx.doi.org/10.1136/bmj.b2700>.
- Lindsay, G. (2003) 'Inclusive education: A critical perspective', *British Journal of Special Education*, 30(1), 3-12.
- Lindsay, G. (2007) 'Educational psychology and the effectiveness of inclusive education/mainstreaming', *British Journal of Educational Psychology*, 77(1), 1-24.

- Lindsay, G. (2011) 'The collection and analysis of data on children with speech, language and communication needs: The challenge to education and health services', *Child Language Teaching and Therapy*, 27 (3), 135–150.
- Lindsay, G., and Dockrell, J. E. (2012) 'Longitudinal patterns of behavioural, emotional, and social difficulties and self-concepts in adolescents with a history of specific language impairment', *Language, Speech, and Hearing Services in Schools*, 43(4), 445-460.
- Lindsay, G. and Strand, S. (2016) 'Children with language impairment: Prevalence, associated difficulties, and ethnic disproportionality in an English population', *Frontiers in Education* [online], available: <https://dx.doi.org/10.3389/feduc.2016.00002>.
- Marks, I. and Stokes, S. F. (2010) 'Narrative-based intervention for word-finding difficulties: A case study', *International Journal of Language and Communication Disorders*, 45(5), 586-599.
- Maul, C. A. and Ambler, K. L. (2014) 'Embedding language therapy in dialogic reading to teach morphologic structures to children with language disorders', *Communication Disorders Quarterly*, 35(4), 237-247.
- McArthur, G. M., Ellis, D., Atkinson, C. M. and Coltheart, M. (2008) 'Auditory processing deficits in children with reading and language impairments: Can they (and should they) be treated?', *Cognition*, 107(3), 946-977.
- McCabe, P. C. and Meller, P. J. (2004) 'The relationship between language and social competence: how language impairment affects social growth', *Psychology in the Schools*, 41, 313-321.
- McCartney, E., 1999 'Barriers to collaboration: An analysis of systemic barriers to collaboration between teachers and speech and language therapists', *International Journal of Language and Communication Disorders*, 34(4), 431-440.
- McCartney, E. (2000) 'Include us out? Speech and language therapists' prioritization in mainstream schools', *Child Language Teaching and Therapy*, 16(2), 165-180.

- McCartney, E. (2002) 'Cross-sector working: Speech and language therapists in education', *Journal of Management in Medicine*, 16(1), 67-77.
- McCartney, E. (2009), Joining Up Working: Terms, Types and Tensions, in Forbes, J. and Watson, C., eds, *Service Integration in schools: Research and policy discourses, practices and future prospects*, Rotterdam: Sense Publishers, 23-36.
- McCartney, E., Ellis, S., Boyle, J., Turnbull, M. and Kerr, J. (2010) 'Developing a language support model for mainstream primary school teachers', *Child Language Teaching and Therapy*, 26(3), 359-374.
- McCartney, E., Boyle, J., Ellis, S., Bannatyne, S. and Turnbull, M. (2011) 'Indirect language therapy for children with persistent language impairment in mainstream primary schools: Outcomes from a cohort intervention', *International Journal of Language and Communication Disorders*, 46(1), 74-82.
- McKean, C., Law, J., Laing, K., Cockerill, M., Allon-Smith, J., McCartney, E. and Forbes, J. (2017) 'A qualitative case study in the social capital of co-professional collaborative co-practice for children with speech, language and communication needs', *International Journal of Language and Communication Disorders*, 52 (4), 514-527.
- McLeod, S. and McKinnon, D. H. (2007) 'Prevalence of communication disorders compared with other learning needs in 14,500 primary and secondary school students', *International Journal of Language and Communication Disorders*, 42(1), 37-59.
- Mecrow, C., Beckwith, J. and Klee, T. (2010) 'An exploratory trial of the effectiveness of an enhanced consultative approach to delivering speech and language intervention in schools', *International Journal of Language and Communication Disorders*, 45(3), 354.
- Ministry for Social and Family Development (2016) *Enabling masterplan 2017 to 2021*, available: <https://www.Msf.Gov.Sg/Policies/Disabilities-and-Special-Needs/Pages/Default.aspx> [accessed 30 November 2016].

- Ministry of Education (2005) *Special Education: A Guide for educators* available: <https://www.Edu.Gov.On.Ca/Eng/General/Elemsec/Speced/Guide/Specedhandbooke.pdf> [accessed 23 December 2016].
- Ministry of Education (2005) *Education for all*, available: www.Edu.Gov.On.Ca/Eng/General/Elemsec/Speced/Speced.html [accessed 17 December 2016].
- Ministry of Education (2009) *Ontario's equity and inclusive education strategy*, available: <http://www.Edu.Gov.On.Ca/Eng/Policyfunding/Equity.pdf> [accessed 18 December 2016].
- Minow, M., (1985) 'Learning to live with the dilemma of difference: Bilingual and special education', *Law and Contemporary Problems*, 48(2), 157-211.
- Nash, H. and Snowling, M. (2006) 'Teaching new words to children with poor existing vocabulary knowledge: A controlled evaluation of the definition and context methods', *International Journal of Language and Communication Disorders*, 41 (3), 335-354.
- National Council of Social Services (2008) *Understanding persons with disabilities-removing barriers* available: <https://www.Ncss.Gov.Sg/Press-Room/Publications/Detail-Page?Id=Understanding-Persons-With-Disabilities> [accessed 12 December 2016].
- National Disability Authority (2015) *Children's Disability Services In Ireland*, available: <https://www.Nda.Ie/Nda-Files/Children's-Disability-Services-In-Ireland-Pdf-Version-.pdf> [accessed 3 January 2017].
- National Council for Special Education (2015) *Supporting students with special educational needs in schools*, available: http://Ncse.Ie/Wp-Content/Uploads/2014/09/Supporting_14_05_13_Web.pdf [accessed 21 November 2016].
- Newman, R. M. and McGregor, K. K. (2006) 'Teachers and laypersons discern quality differences between narratives produced by children with or without SLI', *Journal of Speech, Language, and Hearing Research*, 49(5), 1022-1036.

- Norbury, C. F. and Sparks, A. (2013) 'Difference or disorder? Cultural issues in understanding neurodevelopmental disorders', *Developmental Psychology*, 49 (1), 45-58.
- Norwich, B. (2009) 'Dilemmas of difference and the identification of special educational needs/disability: International perspectives', *British Educational Research Journal*, 35 (2), 447-467.
- Pace, R., Pluye, P., Bartlett, G., Macaulay, A. C., Salsberg, J., Jagosh, J. and Seller, R. (2012) 'Testing the reliability and efficiency of the pilot mixed methods appraisal tool (MMAT) for systematic mixed studies review', *International Journal of Nursing Studies*, 49(1), 47-53.
- Pameijer, N. (2006) 'Towards needs-based assessment: bridging the gap between assessment and practice', *British Educational Research Journal*, 23(3), 12-24.
- Phillips, B. M. (2014) 'Promotion of syntactical development and oral comprehension: development and initial evaluation of a small-group intervention', *Child Language Teaching and Therapy*, 30(1), 63-77.
- Purse, K. and Gardner, H. (2013) 'Does formal assessment of comprehension by an SLT agree with teachers' perceptions of functional comprehension skills in the classroom?', *Child Language Teaching and Therapy*, 29(3), 343-357.
- QSR International (2016) *Nvivo qualitative data analysis software* (V.11) [accessed 2 June 2018].
- Ranade, W. and Hudson, B. (2003) 'Conceptual issues in inter-agency collaboration', *Local Government Studies*, 29, 32-50.
- Royal College of Speech and Language Therapists (2018) *Placing children and young people at the heart of delivering quality speech and language therapy: guidance on principles, activities and outcome*, available: <https://www.Rcslt.Org/Members/Publications/Publications2/Childrenssltservices2018> [accessed 18 December 2018].
- Reeves, S., Russell, A., Zwarenstein, M., Kenaszchuk, C., Conn, L. G., Doran, D., Sinclair, L., Lingard, L., Oandasan, I., Thorpe, K.,

- Austin, Z., Beales, J., Hindmarsh, W., Whiteside, C., Hodges, B., Nasmith, L., Silver, I., Miller, K.-L., Vogwill, V. and Strauss, S. (2007) 'Structuring communication relationships for interprofessional teamwork (Script): A Canadian initiative aimed at improving patient-centred care', *Journal of Interprofessional Care*, 21(1), 111-114.
- Reilly, S., Bishop, D. V. M. and Tomblin, B. (2014) 'Terminological debate over language impairment in children: Forward movement and sticking points', *International Journal of Language and Communication Disorders*, 49(4), 452-462.
- Rice, M. L., Tager-Flusberg, H., Redmond, S. M., Oetting, J. B., McDonald, J. L., Seidel, C. M., Hegarty, M., Paradis, J., Geers, A. and Nicholas, J. (2016) 'Specific language impairment, nonverbal IQ, attention deficit disorder, autistic spectrum disorder, cochlear implants, bilingualism and dialectal variants: Defining the boundaries, clarifying clinical conditions and sorting out causes', *Journal of Speech, Language, and Hearing Research*, 59(1), 122-132.
- Richardson, W. S., Wilson, M. C., Nishikawa, J. and Hayward, R. S., 1995 'The well-built clinical question: A key to evidence-based decisions', *American College of Physicians* [online], available: <http://dx.doi.org/10.7326/ACPJC-1995-123-3-A12>.
- Riches, N. G. (2013) 'Treating the passive in children with specific language impairment: A usage-based approach', *Language Teaching and Therapy*, 29(2), 155-169.
- Rix, J., Hall, K., Nind, M., Sheehy, K. and Wearmouth, J. (2009) 'What pedagogical approaches can effectively include children with special educational needs in mainstream classrooms? A systematic literature review', *Support for Learning*, 24(2), 86-94.
- Rix, J., Sheehy, K., Fletcher-Campbell, F., Crisp, M. and Harper, A. (2013) 'Exploring provision for children identified with special educational needs: an international review of policy and practice', *European Journal of Special Needs Education*, 28(4), 375-391.

- Schmitt, M. B., Justice, L. M., Logan, J. A., Schatschneider, C. and Bartlett, C. W. (2014) 'Do the symptoms of language disorder align with treatment goals? An exploratory study of primary-grade students' IEPs', *Journal of Communication Disorders*, [online], available: <https://dx.doi.org/10.1016/j.jcomdis.2014.06.002>.
- Sen, A, 1992, *Inequality Re-examined*, Oxford, UK: Oxford University Press.
- Smith-Lock, K., Leitão, S., Lambert, L., Prior, P., Dunn, A., Cronje, J., Newhouse, S. and Nickels, L. (2013a), 'Daily or weekly? The role of treatment frequency in the effectiveness of grammar treatment for children with specific language impairment', *International Journal of Speech-Language Pathology*, 15(3), 255-267.
- Smith-Lock, K. M., Leitao, S., Lambert, L. and Nickels, L. (2013b) 'Effective intervention for expressive grammar in children with specific language impairment', *International Journal of Language and Communication Disorders*, 48 (3), 265-282.
- Snowling, M. J. and Hulme, C. (2006) 'Language skills, learning to read and reading intervention', *London Review of Education*, 4(1), 63-76.
- Souza, M. T. D., Silva, M. D. D. and Carvalho, R. D. (2010) 'Integrative review: What is it? How to do it?', *Einstein*, 8(1), 102-106.
- Speech Pathology Australia (2011) *Speech pathologists in school*, available https://www.Speechpathologyaustralia.Org.Au/Spaweb/Whats_On/Schools_Resource_Project/Spaweb/Resources_for_Speech_Pathologists/Speech%20pathologists%20in%20schools/Speech_Pathologists_In_Schools.Asp?Hkey=A3eaf922-244c-4790-9e6f-3c99726a3fe0 [accessed 13 October 2018].
- Starling, J., Munro, N., Togher, L. and Arciuli, J. (2012) 'Training secondary school teachers in instructional language modification techniques to support adolescents with language impairment: A randomized controlled trial', *Language, Speech and Hearing Services in School*, 43(4), 474-95.
- Suter, E., Arndt, J., Arthur, N., Parboosingh, J., Taylor, E. and Deutschlander, S. (2009) 'Role understanding and effective

- communication as core competencies for collaborative practice', *Journal of Interprofessional Care*, 23 (1), 41-51.
- Threats, T. T. (2006) 'Towards an international framework for communication disorders: Use of the ICF', *International Journal of Language and Communication Disorders*, 39 (4), 251-265.
- Throneburg, R. N., Calvert, L. K., Sturm, J. J., Paramboulas, A. A. and Paul, P. J. (2000) 'A comparison of service delivery models effects on curricular vocabulary skills in the school setting', *American Journal of Speech-Language Pathology*, 9(1), 10-20.
- Tomblin, J. (2006) 'A normativist account of language-based learning disability', *Learning Disabilities Research and Practice*, 21(1), 8-18.
- Tomblin, J. B., Smith, E. and Zhang, X., 1997 'Epidemiology of specific language impairment: prenatal and perinatal risk factors', *Journal of Communication Disorders*, 30(4), 325-344.
- Tomblin, J. B. and Zhang, X. (2006) 'The dimensionality of language ability in school-age children', *Journal of Speech, Language and Hearing Research*, 49(6), 1193-1208.
- Tommerdahl, J. and Drew, M. (2008) 'Difficulty in SLI diagnosis: A case study of identical twins', *Clinical Linguistics and Phonetics*, 22(4), 275-282.
- Tong, A., Flemming, K., Mcinnes, E., Oliver, S. and Craig, J. (2012) 'Enhancing transparency in reporting the synthesis of qualitative research: ENTREQ', *BMC Medical Research Methodology* [online], available: <http://dx.doi.org/10.1186/1471-2288-12-181>.
- Toye, F., Seers, K., Allcock, N., Briggs, M., Carr, E. and Barker, K. (2014) 'Meta-ethnography 25 years on: Challenges and insights for synthesising a large number of qualitative studies', *BMC Medical Research Methodology* [online], available: <http://dx.doi.org/10.1186/1471-2288-14-80>.
- United Nations Ministry of Educational, Scientific and Cultural Organization (1994) *The UNESCO salamanca statement*, Paris:UNESCO, available: http://www.unesco.org/education/pdf/SALAMA_E.PDF [accessed 2 May 2019].

- Vangen, S. and Huxham, C. (2013) 'Building and using the theory of collaborative advantage' in Keast, R., Mandell, M. P. and Agranoff, R., eds., *Network theory in the public sector: Building new theoretical frameworks*, New York: Routledge, 51–69.
- Walker, L. O. and Avant, K. C. (2005) *Strategies for theory construction in nursing*, 4th ed., Philadelphia: Lippincott, Williams and Wilkins.
- Westerveld, M. F. and Gillon, G. T. (2010) 'Profiling oral narrative ability in young school-aged children', *International Journal of Speech-Language Pathology*, 12(3), 178-189.
- Wickenden, M. (2013) 'Widening the SLP lens: how can we improve the wellbeing of people with communication disabilities globally', *International Journal of Speech-Language Pathology*, 15(1), 14-20.
- Wolter, J. A. and Green, L. (2013) 'Morphological awareness intervention in school-age children with language and literacy deficits: A case study', *Topics in Language Disorders*, 33(1), 27-41.
- World Health Organization (2002) *International classification of functioning, disability and health (ICF)*, Geneva: WHO Press, available: <https://www.who.int/classifications/icf/en/> [accessed 2 May 2019].
- World Health Organization (2010) *Framework for action on interprofessional education and collaborative practice*, Geneva: WHO Press, available: https://www.who.int/hrh/resources/framework_action/en/ [accessed 22 Mar 2019].
- World Health Organization (2011) *World report on disability*, Geneva: WHO Press, available: http://www.who.int/disabilities/world_report/2011/en/index.html [accessed 11 Nov 2018].
- Xyrichis, A. and Lowton, K. (2008) 'What fosters or prevents interprofessional teamworking in primary and community care? A literature review', *International Journal of Nursing Studies*, 45(1), 140-153.

- Yoder, P., Fey, M. E. and Warren, S. F. (2012) 'Studying the impact of intensity is important but complicated', *International Journal of Speech-Language Pathology*, 14(5), 410-413.
- Zens, N. K., Gillon, G. T. and Moran, C. (2009) 'Effects of phonological awareness and semantic intervention on word-learning in children with SLI', *International Journal of Speech-Language Pathology*, 11(6), 509-24.
- Zwarenstein, M. and Reeves, S. (2000) 'What's so great about collaboration?: We need more evidence and less rhetoric', *British Medical Journal* [online], available: <http://dx.doi.org/10.1136/bmj.320.7241.1022>.

Appendix: *Example of full electronic search string (empirical)*

Database	Search String
Medline/Pubmed/Cochrane	<p>(<i>"language development disorder"</i> OR <i>"language disorder"</i> OR <i>"communication disorder"</i> NOT <i>"acquired language disorder"</i> NOT <i>"speech delay"</i> NOT <i>"delay, speech"</i> OR <i>"Communication – Study & teaching"</i> OR <i>"developmental language difficulties"</i> OR <i>"speech, language and communication needs"</i> OR <i>"language disorders –research"</i> OR <i>"language disorders in children"</i>)AND (<i>"child language"</i> OR <i>child</i> OR <i>school</i> OR <i>adolescent</i> OR <i>minors</i> OR <i>"school-age"</i> OR <i>"primary"</i> OR <i>"elementary "</i> OR <i>"secondary"</i> NOT <i>"pre-school"</i> NOT <i>"kindergarten"</i>)AND(<i>"language therapy"</i> OR <i>"speech and language"</i> OR <i>"service delivery"</i> OR <i>consultative</i> OR <i>integrated</i> OR <i>collaborative</i> OR <i>"language intervention"</i> OR <i>"language instruction"</i> OR <i>"special needs support"</i> OR <i>"class-based"</i> OR <i>"school-based"</i> OR <i>"learning support"</i> OR <i>"specialist language"</i> OR <i>"resource teaching"</i> OR <i>"communication intervention"</i> OR <i>"education* provision"</i> OR <i>small-group intervention</i> OR <i>"milieu teaching"</i> OR <i>programmes</i> OR <i>"speech-language pathology"</i> NOT <i>"second language"</i> OR <i>"conceptual framework"</i> OR <i>"consultative model"</i> OR <i>"evidence-based education"</i> OR <i>"evidence-based practice"</i> OR <i>"health care delivery"</i> OR <i>"Health education"</i> OR <i>"Health resource education"</i> OR <i>"Health care delivery"</i> OR <i>intervention</i> OR <i>"literature review"</i> OR <i>"mainstreaming (education)"</i> OR <i>"models Organizational"</i> OR <i>"reading intervention"</i> OR <i>research</i> OR <i>models</i> OR <i>"service delivery"</i> OR <i>"speech and language therapists (SLTs)"</i> OR <i>"speech & language therapy"</i> OR <i>"speech language pathologist"</i> OR <i>"speech therapy intervention"</i> OR <i>"speech-language pathology – In infancy and childhood"</i> OR <i>teachers</i> OR <i>"teaching methods"</i>)AND</p> <p>(<i>"language tests"</i> OR <i>"vocabulary"</i> OR <i>"comprehension"</i> OR <i>"expressive language"</i> OR <i>"receptive language"</i> OR <i>"communication skills"</i> OR <i>"communication outcomes"</i> OR <i>"social skills"</i> OR <i>literacy</i> OR <i>reading</i> OR <i>comprehension</i> OR <i>vocabulary</i> OR <i>exam*</i> OR <i>curriculum*</i> OR <i>emotion*</i> OR <i>behaviour*</i> OR <i>attention</i> OR <i>friendship*</i> OR <i>participation</i> OR <i>"quality of life"</i> OR <i>"British Picture Vocabulary Scale"</i> OR <i>"Bus Story"</i> OR <i>"Clinical Evaluation of Language Fundamentals"</i> OR <i>"Dose-Response Relationship"</i> OR <i>"Effect Size"</i> OR <i>Grammar</i> OR <i>"Individual Reading Analysis"</i> OR <i>"Information scale"</i> OR <i>"Treatment Duration"</i> OR <i>"Treatment Outcomes"</i> OR <i>Vocabulary</i> OR <i>"Wechsler Objective Language Dimension"</i> OR <i>"Test of Reception of Grammar"</i>)</p>

Chapter 5

Paper III

Gallagher, A. L., Murphy, CA., Conway, P.F. and Perry, A. (2019) Engaging multiple stakeholders to improve speech and language therapy services in schools: An appreciative inquiry-based study', BMC Health Services Research, 19 (1) 226.

This research article is the third of six manuscripts presented as chapters 3-6 of the doctoral thesis. In the paper, the findings of a qualitative study are reported. It was conceived and written by the PhD candidate with guidance from Professor Alison Perry, Dr. Carol-Anne Murphy and Professor Paul Conway.

One aim of the study was to describe the optimal speech and language therapy services and supports to school from the perspectives of key stakeholders. This involved conducting focus groups with parents, SLTs and teachers, as well as semi-structured interviews with children who have DLD. A second aim was to determine the extent to which stakeholders shared the same priorities and preferences.

Specific research questions to be addressed were:

- (i) How do stakeholders (SLTs, teachers, children with DLD and parents/carers of children with DLD) describe their optimal collaborative SLT services and supports to schools?
- (ii) How well-aligned are the views across these stakeholder groups?
- (iii) What, if any, are the implications of these findings for improving collaborative practice?

Engaging multiple stakeholders to improve speech and language therapy services in schools: An appreciative inquiry-based study

Abstract

Background

Effective collaboration between speech and language therapists (SLTs) and teachers is essential in meeting the needs of children with developmental language disorders in school, but it is difficult to achieve. Currently, many children receive inadequate speech and language therapy services and/or support in school. The aim of this study was to engage key stakeholders (SLTs, teachers, parents and children with DLD) in the co-design of their ideal speech and language therapy service and support in school. The study was undertaken in order to inform the development of a conceptual model to guide collaborative practice when working with this population.

Methods

A qualitative study involving a diverse range of key stakeholders and using appreciative inquiry. This is a method which enables those involved to construct their ‘ideal’ about a topic of interest. Recruitment was carried out using purposive sampling. We conducted focus groups with practitioners (SLTs and teachers) and parents as well as semi-structured interviews with children who have DLD using ‘draw and tell’ techniques. A total of five focus groups and nine interviews were conducted with participants (n=27).

Results

The children described their ideal supports as those which enabled them to connect, contribute and achieve. They describe ways in which

environmental barriers in school needed to be addressed to allow them to do so. The professionals primarily described ways in which the language skills of the child could be improved. Both parents and practitioner groups described the importance of strengthening networks between service providers and service users. They also highlighted the need to promote a collaborative culture if stakeholders are to work effectively together across sectors.

Conclusions

There were differences in perspectives about the ways in which speech and language therapy services and supports could be improved, demonstrating the importance of engaging a diverse group of stakeholders. Of note were the unique insights the children brought about the barriers they faced as a result of their difficulties. Based on our findings we propose that children should be given influence in decisions about the supports that they receive in school. Implications for policy, research and practice are discussed.

Keywords: Inter-professional collaboration, health service improvement, stakeholder involvement, developmental language disorder, child voice, appreciative inquiry, thematic analysis.

Background

For decades, inter-professional collaboration (IPC) has been recognised in policy as essential if outcomes for children with developmental disabilities in school are to improve (United Nations Ministry of Educational, Scientific and Cultural Organization 1994; World Health Organization 2000; World Health Organization 2011). This is particularly so for children with developmental language disorders (DLD) because their difficulties have implications - not just for communication in school, but for their learning (Dockrell and Lindsay 1998; Lindsay and Strand 2016). Working collaboratively in schools presents health service planners and practitioners with complex challenges, many of which remain unresolved. Consequently, many children with DLD go unidentified or receive inadequate support in school (Dockrell *et al.* 2012), resulting in poor long term outcomes (Durkin *et al.* 2009; Johnson *et al.* 2010). Specifically, children with DLD may do less well in national examinations, are at risk of emotional behavioural difficulties (Conti-Ramsden and Botting 2008; Durkin and Conti-Ramsden 2010), can struggle to gain employment (Conti-Ramsden and Durkin 2012), and to live independently as adults (Johnson *et al.* 2010).

According to the World Health Organization, IPC occurs when, “two or more individuals from different professional backgrounds with complementary skills interact to create something that none had previously possessed or could have come to on their own” (World Health Organization 2010, p.36). The desired outcome of IPC is ‘collaborative advantage’ or the possibility of creating something greater collectively than that which is

achieved when practitioners work alone (World Health Organization 2010; Vangen and Huxham 2013). If SLTs and teachers can work collaboratively towards an agreed set of goals, then a child with DLD can attain improved language, literacy and educational outcomes (Throneburg *et al.* 2000; Starling *et al.* 2012; Archibald 2017). In the process, practitioners may also develop enhanced skills and knowledge; that is, teachers may better modify their language to children with DLD in the classroom and SLTs may gain knowledge about the curriculum (Hartas 2004; Wilson *et al.* 2015).

Theoretical framework of the study

D'Amour *et al.* (D'Amour *et al.* 2008) propose a model which provides a useful framework to develop our understanding of IPC in this context. The model has four elements, two of which relate to the process of collaboration at an *individual level* and two others to IPC factors at an *organisational level*.

Individual level dimensions are *shared goals and vision* and *internalization*. Having *shared goals and vision* refers to having an agreed set of outcomes and a direction to work towards. Internalization describes the degree to which those involved have an awareness of the differences between them, and the degree to which these differences are managed. According to D'Amour *et al.* (2008), managing difference is necessary to foster a sense of belonging and of trust between across those involved. In the case of SLTs and teachers, several barriers at this level have been discussed in the literature. Some of these relate to professional/philosophical differences and others to practical/logistical issues. A lack of shared language and understanding between the professionals involved about DLD

has been identified consistently as a barrier (McCartney 1999; McCartney 2009). Further, many collaborative encounters between SLTs and teachers are ‘one off’, time-limited events, involving practitioners who are unfamiliar with one another. As practitioners don’t work together in a sustained way, it is difficult for them to develop an awareness of difference, and/or to develop the necessary trust and/or a sense of belonging (McCartney 2000; McKean *et al.* 2017).

The two organisational dimensions include; *formalization*, the degree to which procedures exist that facilitate IPC (thereby clarifying expectations and responsibilities) and *governance* - leadership that gives direction to, and support for, collaborative working. It is difficult to determine the extent to which IPC is formalised between SLTs and teachers. In parts of the USA where SLTs are employed directly through education services, the school principal oversees the work of the SLT in school. However, it is not clear whether formal procedures exist at a school or a district level that relate specifically to collaborative planning and delivery of supports between SLTs and teachers. In the UK, Ireland and many European countries where SLTs are mainly employed by the health sector, formal cross-agency procedures to support IPC between practitioners are rare (Dockrell *et al.* 2014; Dockrell and Howell 2015b). In terms of governance, a recent review of speech and language therapy services in the UK showed continued variability in the extent to which school leadership supports IPC between SLT and teachers (Dockrell *et al.* 2014). This is consistent with the findings of an Australian study where the need for leadership/organisational support for IPC has been identified in relation to work by SLTs in schools

(Glover *et al.* 2015).

In summary, if SLTs are to be effective in meeting the needs of children with DLD in school, then they need to plan and deliver support collaboratively with the teacher. However, effective IPC is rare in practice with barriers evident, both at individual and at organisational levels. Our knowledge of how to facilitate IPC in this context is limited which can leave the child with DLD at a disadvantage, both socially and educationally.

In this paper we report the findings of the second of a multi-phased study aimed at developing a conceptual model to guide collaborative practice when working to meet the needs of children with DLD in school. In phase one, we examined the empirical and policy literature across the fields of speech and language therapy and education, searching for a shared understanding about this population that might inform the model. Whilst understanding perspectives in the literature is important, so too are the views of service users about how health services can be improved (Mockford *et al.* 2011). We therefore wanted to gain an understanding of what it is key stakeholders want from their ideal supports/services to schools.

Aim, purpose and methodological approach

The aim of this study was for parents, SLTs, teachers and children with DLD to design their ideal speech and language therapy service and supports to schools. We were also interested in the degree to which the views of the different groups were aligned (or not) and the implications of this for successful IPC. Given that the views of these stakeholder groups are relatively under-researched, (Roulstone and Lindsay 2014) we aimed to

conduct our qualitative analysis inductively rather than with a pre-existing set of codes in mind in order to generate a rich description of the data set as a whole. We conducted a thematic analysis at a semantic level, describing what participants said and interpreting this in relation to the previous literature, rather than undertaking a latent analysis, where the researcher is looking for meaning beyond what participants said (Braun and Clarke 2006).

We followed the ‘consolidated criteria for reporting qualitative research’ guidelines in reporting this study (Tong *et al.* 2007). These ensure that sufficient detail is included in the reporting of a qualitative study to enable the reader/reviewer to appraise the quality and rigour of the research.

Methods

Participants

A purposeful sample of participants was recruited to the study. The sample included 29 participants in total: SLTs (N=8), teachers (N=5), parents (N=9) and children with DLD (N=7). Each professional was recruited considering their current post, years of experience, gender, and either work setting (SLTs) or type of school in which they work (teachers) for wide representation. Children were recruited according to age, gender and primary diagnosis, as well as different types of speech and language therapy support received and type of school attended. Parents (fathers and mothers) were recruited across Ireland and came from different socio-demographic backgrounds. Collectively, they had experience of accessing the full range of speech and language therapy services and supports

currently available for children with DLD in Ireland. Parents and children were recruited via a national support network for parents with DLD using snowballing techniques and practitioners were recruited through professional bodies and established clinical networks via email/phone contact. See participant details in the results section.

Topic guides

We used appreciative inquiry when developing the topic guides for the focus groups and interviews. Appreciative inquiry was developed by Cooperrider and Whitney (2005) in the field of organisational psychology as a method of generating new ideas about a topic of inquiry. The approach does not start with a pre-defined ‘problem’ that needs to be fully understood in order to remediate it, but enables those involved in the process to focus on the ‘ideal’ situation. It has been previously used successfully to document the views of children who have DLD about how they would like their life to be in the future (Roulstone *et al.* 2012). A pilot session with one SLT, one teacher and a parent of a child with speech, language and communication needs was run, to refine the topic guide for the focus groups. The activities were piloted with two children also prior to conducting the interview (see Appendix 1 and 2 for topic guides).

Procedure

Focus groups

Five focus groups were held with practitioners and parents. These included three same-participant groups and two mixed participant groups. It was planned to have two mixed groups with all three participants (SLT, teacher and parents). However as some parents did not wish to attend such

mixed groups, only one group had all three participant types; a second was attended by one SLT and one teacher (see Figure 1 for a summary of groups held, location and participants involved).

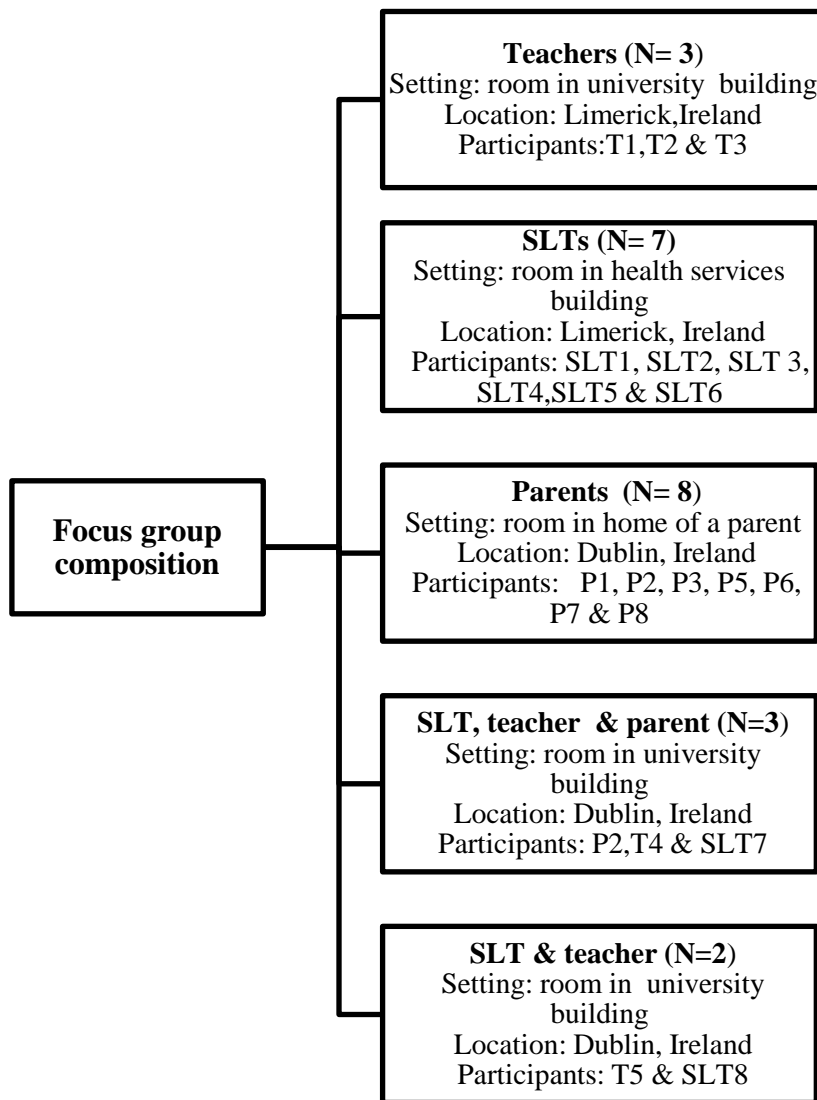


Figure 1. Composition of focus groups with speech and language therapists, teachers and parents.

All focus groups were facilitated by the first author (ALG), a PhD candidate and qualified SLT who had worked previously with school-aged children with DLD and had undergone additional training in appreciative

inquiry. The parents, teachers and children who participated were not known to the SLT prior to the study. Two of the SLTs who took part were known to ALG in a professional capacity from attendance at professional forums. The participants were informed in writing of the aims of the study and the professional background of the facilitator prior to gaining consent. The facilitator had further phone/ email contact about the study prior to data collection with the participants. At the beginning of each focus group, the facilitator introduced herself, described her prior clinical experience and interest in working in schools, and the aims of the study. The focus groups each lasted between 60 and 70 minutes. An observer was present at each session to document any non-verbal interactions and/or actions that occurred between participants and the facilitator, using a standard observation checklist. The observers were PhD candidates currently undertaking qualitative research projects. Following each focus group, a discussion was held between the observer and facilitator about these observations, with the discussions audio-recorded for later integration with the transcripts during analysis.

Semi-structured interviews

Seven semi-structured interviews were held with the children. The children were given the choice to be interviewed alone or with someone else present. Two children were interviewed with a parent present and one with their sibling. The facilitator met the children on two occasions. The purpose of the study was explained at the first occasion; planned activities were demonstrated and the participant(s) became familiar with the facilitator. The interview proper was then conducted at a second visit. The facilitator

recorded field notes directly after each interview.

When planning the interviews for children with DLD, consideration was given to issues of participation, trust, consent, power, and control (Hill *et al.* 2016). For example, each child was given a red and yellow card at the start of the group. The children knew that they could show the facilitator the yellow card if/when they struggled to understand a task. This signaled to the facilitator the need to adapt or simplify her language. All but one child used this strategy during the interviews. They also knew that they could withdraw their consent to participate at any time, by raising a red card. Draw-and-tell techniques were used with the children. This widely-used technique encourages children to participate by reducing the pressure on a child to communicate verbally (Einarsdottir *et al.* 2009; Holliday *et al.* 2009). The children's comprehension of tasks was assisted by employing augmentative methods of communication. The duration of the interviews was influenced by the communication abilities of the children, varying between 35 and 50 minutes. All interviews were audio-recorded.

Data transcription and analysis

There were three researchers directly involved in the transcription and analysis (author 1 and two researchers). The interviews were transcribed post hoc by author 1, also the facilitator of the groups. These were checked for accuracy by researcher 2. We followed Braun and Clarke's six-phased guide when analysing the data (Braun and Clarke 2006). Data were managed using NVivo 11 (QSR International 2016), a software package which enables a large amount of coded text to be sorted and tracked and for

analytical notes about coding decisions to be stored. This enhanced transparency in analysis.

Coding

A transcription from one of the focus groups was randomly selected by researcher 2 for double-coding. A section of this transcription was coded by each researcher independently, and coding decisions were discussed. When both researchers felt there was, “consistency of meaning” (Madill et al. 2000) - viz., there were few differences evident in relation to the coding decisions – a further section was coded in the same way. This process was undertaken for the transcripts from the semi-structure interviews also. In total, one full transcript from the focus groups and two transcriptions from the interviews were coded in this way. A process of constant comparison was undertaken to generate codes until a final set of codes was identified. Researcher 3 then examined the codes that had been generated from the data and made suggestions about merging some of them. From this, categories were generated which were descriptive, rather than interpretive. Once the codes were organised into categories, key themes were identified. These were presented to co-authors (CAM, PC and AP) on three occasions for refinement. Finally, the themes were re-presented to the participants for checking/comment.

Results

Participant details

Details of the participants involved in the study are set out in Tables 1, 2 and 3 below.

Table 1 *Participant details (professionals)*

Participant reference	M/F	Current role	Employer	Work setting	Professional experience
T 1	F	Class teacher	Education	Primary school *	4 years
T 2	F	Class teacher	Education	Primary school	6 years
T 3	F	Resource teacher [#]	Education	Primary school*	6 years
T 4	F	Resource teacher	Education	Language class ~	3.5 years
T 5	M	Principal	Health	Primary school	10 years
SLT 1	F	SLT	Education	Secondary school	4 years
SLT 2	F	SLT	Health	Primary care ⁺	8 years
SLT 3	F	SLT	Health	Primary care	1 year
SLT 4	F	Manager	Health	Primary care	11 years
SLT 5	M	SLT	Health	Primary care	7.5 years
SLT 6	F	SLT	Health	Primary care	2.5 years
SLT 7	M	SLT	Health	Language class	2 years
SLT 8	F	SLT	Education	Secondary school	9 years

Note. T= teacher. SLT= speech and language therapist. * = a category of school serving a population of high social need, [#] a resource teacher is responsible for delivering supports to children with additional needs in schools in Ireland. ~ = a ‘special’ class with reduced numbers of children in a mainstream school, all of whom have severe DLD. An SLT is assigned to the class, providing regular input. ⁺ = SLT provided in the community as part of a primary care team.

Table 2 *Participant details (parents)*

Participant reference	Relationship to child	Location	Speech and language therapy services accessed
P 1	Mother	Dublin	Primary care service ⁺ , language class~ and CAMHS*
P 2	Mother	Limerick	Primary care service, language class and private SLT
P 3	Mother	Dublin	Primary care service, language class and special school
P 4	Mother	Clare	Primary care service
P 5	Mother	Cork	Primary care service
P 6	Mother	Dublin	Primary care service and private SLT
P 7	Mother	Dublin	Primary care service
P 8	Father	Dublin	Primary care service
P 9	Father	Tipperary	Early intervention [#] , primary care service and language class

Note. P= parent. + = speech and language therapy service provided in the community as part of a primary care team. ~ = a ‘special’ class with reduced numbers of children in a mainstream school, all of whom have severe DLD. There is an SLT (employed from the local health service) assigned to the class, providing regular input.* = Child and Adolescent Mental Health Services. # = multi-disciplinary team of health professionals who provide diagnostic services and treatment for children with multiple needs prior to school-age.

Table 3 *Participant details (children)*

Participant Reference	Gender	Age	Type of provision	School type Urban/Rural	Diagnosis
C 1	M	12	Mainstream	Urban	DLD#
C 2	F	11	Special+	Rural	DLD
C 3	M	13	Mainstream	Urban (DEIS*)	DLD
C 4	M	12	Mainstream	Urban (DEIS)	DLD
C 5	F	11	Mainstream	Rural (DEIS)	DLD
C 6	M	10	Mainstream	Urban	DLD
C 7	M	13	Mainstream	Rural (DEIS)	DLD & EBD^

Note. C= child. DLD= #developmental language disorder + = a school catering exclusively for children with additional needs, * = DEIS is an acronym for ‘Delivering Equality of Opportunity in Schools.’ It is a category of school serving a population of high social need, and allocated additional resources, ^= Emotional behaviour disorder.

Themes

Four themes were identified in the data set (see Fig. 2 for an overview of the themes). These related to: (i) the nature of the ideal supports for the child with DLD in school; (ii) the ideal setting; (iii) desired outcomes for the child with DLD and (iv) characteristics of the ideal service. The categories which relate solely to the views of the children/young people who participated in the study are marked with bold text and an asterix.

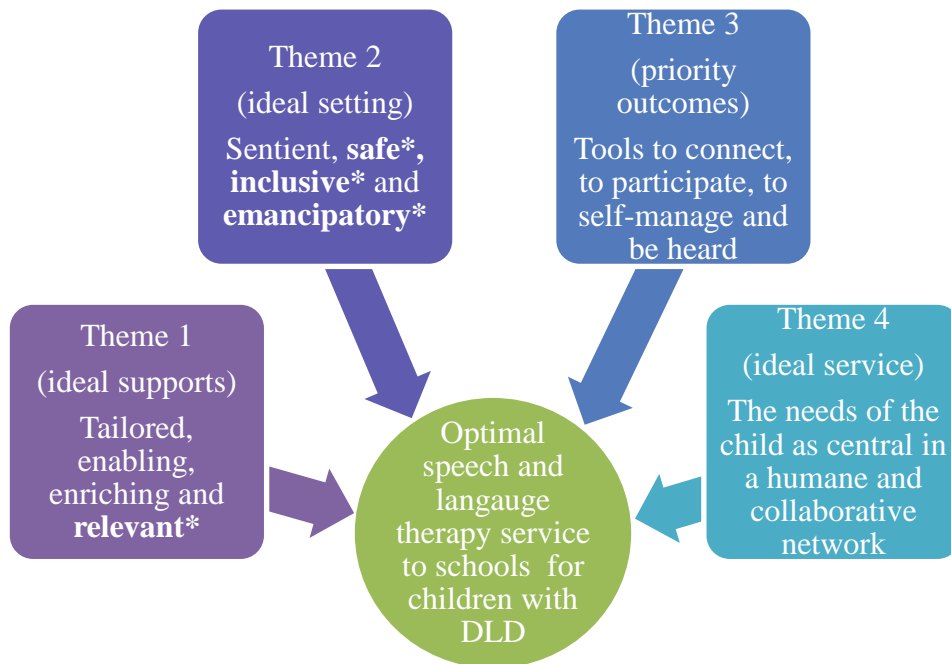


Figure 2. Overview of themes.

In Table 4, we present the supporting categories that map the contributions of each stakeholder group to each theme. Examples of direct quotes from the data set are provided under each theme. In these quotes, we have used a process of ellipsis to improve readability. This involves replacing fillers/hesitations using a series of dots. Quotes have not been edited beyond this process.

Table 4 *Themes and supporting categories*

Theme	Supporting categories
Tailored, enabling, enriching and relevant supports that enhance the child's learning and social capital	Tailored (individualised*, proactive ^a) Enabling (strengths-based*, supports independence*, supports the ability to make choices*) Enriching* (more than language*, beyond the classroom*) Relevant ⁺ (supports that address issues of inclusion and exclusion ⁺ and the development of social capital ⁺)
A sentient, safe, inclusive, emancipatory setting	Sentient (listening ^a , noticing ^a) Safe ⁺ (to make mistakes ⁺ , explicit expectations ⁺ , consistent responses ⁺) Inclusive (diversity as valued ⁺ , presuming competence ⁺) Emancipatory (democratic ⁺ , power and control ⁺)
To be able to connect, participate, self-manage and be heard	Connect and participate* (friendship skills*, negotiating entry + p contributing in class ⁺) Understand (people ⁺ ^p , rules ⁺) Self-manage (awareness of own needs and feelings, able to self-regulate ^p , able to seek support a, strategies for survival ⁺) Have a voice (speaking up, speaking out ^p , influencing ^p)
The needs of the child as central in a humane and collaborative network	Needs-led (aims a, resource allocation ^a) Humane (ethic of caring ^a) Collaborative (equality in relationships ^a , shared responsibility ^a) Network (professional autonomy a, responsive a, blurred roles and boundaries ^p)

Note. * = views expressed by all stakeholders, ^a = views expressed by parents, SLTs and teacher, ⁺ = views expressed by children only, ^p = views expressed by parents only.

Theme 1: The ideal supports are tailored, enabling and enriching, and enhance the child's learning and social capital

SLTs, teachers, parents and children described ideal supports as being *individually-tailored* to their/ a child's /needs and interests. These supports were described, not as prescribed procedures, but as supports that are regularly reviewed and refined, according to an individual child's changing needs (Table 5, Quote 1). Tasks in the classroom would be set at the 'right level' of difficulty, so that each child would be challenged (Table 5, Quote 2). One of the children described positive feelings when this balance of being challenged but supported was achieved previously with regard to their learning (Table 5, Quote 3). Supports which capitalise on the *interests* of the individual child were discussed by all - teachers (Table 5, Quote 4), parents and children. The children for example, referred to support that helped them in the subjects that interested them (Table 5, Quote 5).

A further characteristic related to support which is *enabling* that is, delivered in a way which makes a child feel that they can succeed. Teachers discussed the idea of a strengths-based approach to support a child in school (Table 5, Quote 6). This involved knowing what a child can do and then using this knowledge to facilitate success in tasks that are difficult for them. Support that provides a child with a set of tools to use in different situations was also discussed. Such tools would enable a child to become more independent in classroom learning (Table 5, Quote 7). Parents were clear, however, that in order to get the child to be able to use such tools, they would need to be explicitly taught to do so, in the relevant context by

practitioners (Table 5, Quote 8 & 9). Supports that enable the child to make informed choices about their learning was discussed by children and parents. One child for example, described having support to make good choices about books; books that would help them to become better at reading (Table 5, Quote 10).

A third characteristic related to the importance of providing *enriching* learning opportunities that are not delivered through language instruction alone. These may occur in the classroom (Table 5, Quote 11) as well as outside of school. One parent describes a trip out of school, which they felt was effective in supporting language learning (Table 5, Quote 12). One teacher explained the idea of “active learning,” which she felt would be an effective approach for planning support for a child with DLD (Table 5, Quote 13). Parents discussed the importance of practitioners working across contexts in delivering supports. They described the SLT working in the classroom with the teacher (Table 5, Quote 14). Teachers discuss the need for home and school to work together to consolidate learning (Table 5, Quote 15).

A final characteristic, described by the children only, related to support that was *relevant* - that is, informed by the children’s experiences of times when they are excluded socially or unable to participate in school. Their ideal supports would provide them with the skills to navigate the ambiguities of social contexts and relationships and which enabled them to contribute in class. A child, for example, expressed the desire for help to decode the ‘unspoken rules’ which he described as those that were understood by others -teachers and children- but not by him (Table 5, Quote

16). Another child discussed the possibility of having assistance to learn how to enhance her social status among her peers, so that she would be included (Table 5, Quote 17).

Table 5 *Quotes from the data set related to theme 1*

Quote No.	Participant Reference	Quote
1	T 1	"...you do it for a certain amount of weeks but then you need to change it up again depending on the child's response ...every child responds differently to what's done in class, it is the response that counts"
2.	P 9	" supports... so they (the child) are not overwhelmed but that the learning is set just right for them, cos they know the child so well and then the child can succeed"
3.	C 5	"I can do the work it's hard but not too hard ...so I'm learning ...but I feel good"
4.	T 4	"... finding out things that motivate him or topics he likes talking about and starting from there"
5.	C 4	"... I like learning about the past. I want help with hard stuff that I like, like that"
6.	T 3	"... to find a hidden talent or an activity for him that he's good at ... then use that learning to help him with other activities ..."
7.	T 2	"... so the supports allow him to take risks and have a go at things himself"
8.	P 2	"... if he could be supported to get better at problem solving – great but then to practise this, now that would be good support"
9.	P 1	"...they have to be practised... he needs to be given the language to do it and loads of chances to practise it "
10.	C 1	"I want to pick books myself to read...help to choose a good book for me, not just what's the reader, at school, we just do the readers"

Quote No.	Participant	Quote
11.	C 1	"I like experiments it makes it easy to learn if you are doing it. So we did an experiment before with washing up liquid and more art cos you can think about things, it's another, it gives you another way to think about things"
12.	P 2	"They went to the fire station and afterwards, it's what they did with it – they didn't go into books, they talked about the day, so they were using the words and practising communicating with each other"
13.	T 4	"(For the child with DLD) it's so important getting away from books and do things in a real life context"
14.	P 7	"if the SLT went in to see the dynamic in there (the classroom), they might be able to help with how things are done... that would really help him every day"
15.	T 2	"it's about crossing context ... the home as well as the school...supports need to continue in the home as well ..."
16.	C 3	"Yeah the rules just don't make sense and also sometimes they (the teachers) say don't have a phone in school and but they (children) do have a phone in school and they (the teachers) know it. I don't get it... I want real help with understanding the rules that can be broken"
17.	C 2	"I want to be cool... for others to think I'm cool...so they will want to play with me...can someone learn me that?"

Note. C= child, P= parent, SLT= speech and language therapist, T= teacher.

Theme 2: The ideal setting is one which is sentient, safe, inclusive and emancipatory

Of all the stakeholder groups, it was the children who contributed the most to this theme. Parents and practitioners described their ideal classroom setting as sentient;-that is, one where there was a culture of listening and noticing. In their ideal classroom all those involved with the child with DLD would make the 'effort' to listen to them (Table 6, Quote

1). If the child was not engaged in learning, this would also be noticed, and the child would be encouraged to do so (Table 6, Quote 2).

The children spent most of their time talking about their ideal setting. They described it as one, which is *safe*, *inclusive* and *emancipatory*. They described a classroom in which they felt *safe* to take risks with their learning and talking, without fear of negative exposure (Table 6, Quote 3). There would be clear and explicit expectations (aka rules) about how students treat each other in this classroom (positively, and with respect for each other) and there would be consistent responses from teachers to reinforce these values (Table 6 Quote 4). This characteristic was discussed when the children recounted experiences of being bullied and/or where they reported feeling exposed and humiliated in a class.

All children described a setting which was *inclusive*. While parents and practitioners focussed on the importance of the child with DLD being accepted (despite their differences) by the rest of the children in their peer group (Table 6 Quote 5), the children described a classroom where *every* child is seen as different (Table 6 Quote 6). In the children's ideal setting, difference would be openly discussed and celebrated as a positive resource (Table 6 Quote 7) and the children would like each other *because* of their differences, rather than despite them (Table 6 Quotes 8).

A final characteristic of their ideal setting, discussed by the children, related to *power* and *control*. Their ideal setting was one where the children had influence in decisions (Table 6 Quote 9), and where they had more control over speaking in the class (Table 6, Quote 10). All of the children talked about how language is used and by whom, in the classroom. In their

ideal classroom, they would be given the space to use language for a variety of purposes rather than being restricted to answering the teacher's questions. This was in the context of recounting feelings of humiliation due to being unable to provide the right information requested by the teacher, in front of their peers (Table 6 Quote 11). In their ideal classroom, children would have more control over how language can be used and more opportunities to use language to think (Table 6 Quote 12). The children were clear that they need to be given more chance to practise talking, for their language to improve.

Table 6 *Quotes from the data set related to theme 2*

Quote No.	Participant Reference	Quote
1	T2	“(In this school), he gets the feeling that people have time for him. And can be bothered to figure out what it is he wants to say...”
2.	P8	“he (the child with DLD) needs someone to notice him... and to coax him out and to encourage him to try”
3	C3	“not so much pressure to answer questions...instead of asking us quickly for the answer... and looking stupid”
4.	C5	“in this school if you are mean you have to go to time out no excuses”
5.	P7	“To be accepted.... I think all of us want our child to be accepted. I should add- easily. I mean all the other kids are accepted easily aren’t they?”
6.	C2	“so all these students are very different...there is all sorts in there...all with different talents”
7.	C3	“They (the students in the ideal classroom) wouldn’t say ‘I’m better than you’... they say ‘everyone is different’, ‘you’re good at this’ and ‘he is good at that’”
8.	C2	“they (the students) like each other, because mmm.. normally people don’t like them because they are very strange and they just don’t like them ...but strange is good in this school”
9.	C4	“Yeah, the kids are in charge in my school... they decide...”
10.	C1	“The teacher does all the talking and the children are not allowed talk- in this class the children can talk”
11.	C3	“ ... the teacher is always asking us for the answer... it annoys me the way the teacher asks a question that they know and you might not know it and you have to say ‘I don’t know’ and you act like a fool “
12.	C1	“In class...there is more time to talk... and more chances to practise talking cos... it helps you think about things”

Note. C= child, P= parent, SLT= speech and language therapist, T= teacher.

Theme 3: The child with DLD will be able to connect and participate, understand, self-manage and have a voice in their lives

All the stakeholder groups mentioned the ability to connect with others and to maintain good quality friendships as a priority skill for children with DLD to learn. Whilst practitioners and parents discussed the outcome of ‘having a friend’ in broad terms (Table 7, Quote 1 & 2), the children described the skills they need to be able to achieve this, specific to the context of the nature of social relationships that are formed and maintained in school. For example, one child discussed needing to *learn the language of their peers* as a ‘way in’ (Table 7, Quote 3).

All stakeholders stated that being able to participate in class was an important outcome but there were differences in perspective about the meaning of participation. For practitioners, successful participation was described as the child with DLD being able to demonstrate the required knowledge in ‘typical,’ tightly-controlled classroom interactions. They repeatedly described a child with DLD with their hand up, willing and being able to answer a teacher’s question (Table 7, Quote 4). The children, by contrast, wanted to be able to participate, not to demonstrate knowledge but rather to contribute to the development of ideas (Table 7, Quote 5). For the children, participation was discussed as a means by which they could learn through language.

Another outcome, described by both parents and children, was the ability to understand or, more specifically, to make inferences about people and social situations (Table 7, Quote 6). One child stated that, if they were a super-hero, their special power would be ‘to be able read people’s minds’

(Table 7, Quote 7). Another child discussed their wish to be able to ‘read’ other children and to know how to respond in a suitable way (Table 7, Quote 8). Three children said they wanted to understand the ‘unwritten rules’ in school, which they struggled to comprehend. They discussed this outcome in the context of describing how their current inability to do so, resulted in their being excluded from the school community.

A further outcome related to a child with DLD being able to independently manage their needs in school. All stakeholders discussed the importance of self-management, although they had differing views about the purpose of having such skills. Parents and professionals talked about self-management in the classroom only. They wanted a child with DLD to be able to use strategies to manage their learning and language needs. They discussed the importance of knowing when to seek support (Table 7, Quote 9 and being able to regulate feelings and behaviour in readiness for learning (Table 7, Quote 10). SLTs, in particular, emphasised the importance of a child being aware of their comprehension difficulties in the classroom and being able to signal to the teacher when they needed help in understanding (Table 7, Quote 11).

The children wanted strategies to manage complex/nuanced issues related to navigating ethical dilemmas and peer relations. They also talked about the need for strategies that would help them to ‘survive’ and ‘stay safe’ in the context of their relationships with peers. For example, one child described developing an outer personality (which was contradictory to how they felt inside), to avoid being a target of bullying (Table 7, Quote 12).

A final outcome, mainly discussed by parents, related to children

with DLD ‘having a voice.’ They wanted the child with DLD to be able to stand up for her/himself (Table 7, Quote 13) and to speak up when they encountered injustice (Table 7, Quote 14). Parents wanted their children with DLD to be able to influence those around them in decisions, which impacted on their lives (Table 7, Quote 15).

Table 7 *Quotes from the data set related to theme 3*

Quote No.	Participant Reference	Quote
1	T 5	“to have good friends., true friends”
2.	P 6	“they are not in the clique – in the gang, they are outsiders and don’t know how to get in- they need to know how to get in”
3.	C 1	“I want to talk, you know like, talking the way they (peers) do, so they will listen and think I’m interesting”
4.	SLT 7	“he is putting his hand up in class.. participating...he knows the answer”
5.	C 1	“ to be able to talk more in class, so I can to try out new ideas”
6.	P 6	“they need to be able to figure out the grey areas, you know, reading other people’s intentions”
7.	C 2	“ ... to be able to listen to people’s thoughts and see inside their head”
8.	C 6	“if this person was feeling this way... knowing how that person is feeling ... learning what would you do”
9.	T 1	“everybody has strengths and weaknesses. The important thing is that you know yourself so you can help yourself”
10.	P 6	“ I want him to be able to notice that (how he feels) himself and be able to do what he needs to keep himself right”
11.	SLT 8	“I think for children who don't understand, it would be one of the key strategies to actually know it and say when they don't understand”
12.	C 2	...everybody thinks he is really brave but inside he is a really scared guy, he just acts like a tough guy in front of people...and they believe him and they leave him alone”
13.	P 7	“ to be able to get stuck in and fight his corner in there- in a good way obviously”
14.	P 9	“to express himself when he feels it’s not fair in school”
15.	P 6	“life is about choices and decisions – nothing is black and white, everything can be negotiated...you can shape your own choices...I want him to be able to do that”

Note: C= child, P= parent, SLT= speech and language therapist, T= teacher.

Theme 4: The ideal service is humane and collaborative and places the needs of the child with DLD as central

Parents and practitioners described a service, which should be, first and foremost, ‘needs-led.’ In other words, all of the service and resource decisions (who is involved with the child and family, for how long, and in what way) would be underpinned by one agenda - the child needs (Table 8, Quote 1) and to deliver these (Table 8, Quote 2). This is in contrast with parent’s perceptions of current speech and language therapy services, which they perceived to focus on *limiting* the child’s access to resources.

The ideal service, according to parents and practitioners, considers the classroom environment when determining the needs of the child. The focus of interventions and the outcomes which are measured by such a service are not just related to clinical outcomes, but also to social interaction (Table 8, Quote 3 & 4). Parents, in particular, highlighted that the ideal service would address the barriers the child faces in school because of their language difficulties. The ideal service, according to the parents, offers continuity of care as it is also informed about the persistent nature of a language disorder, and aware that it is a lifelong condition (Table 8, Quote 5). They discussed the negative consequences for a child and family of being moved, ‘in and out’ of different services, which they had experienced previously

A second characteristic was that an ideal service would have, at its core, an ethic of care for the service users as well as for those who deliver the service. When representing this service on paper, parents, SLTs and teachers frequently drew arms and/or a heart around a child to emphasise

that they would be ‘cared for’ within an ideal Speech and language therapy service (Table 8, Quote 6 &7).

A third characteristic related to the collaborative nature of the ideal service. Collaboration was described as involving two key elements; *equal* partnerships and a *sharing* of responsibility. Equal partnerships were described as those where parents and their children with DLD were listened to; where their opinions counted (Table 8, Quote 8 & 9). Parents and practitioners described how decision-making about supports would be shared between the parent(s), practitioners and the child (Table 8 Quote 10), rather than (as at present) being controlled by the professional(s) alone.

A sharing of responsibility in meeting the needs of the child with DLD in school by all those involved was discussed by all stakeholders. Parents discussed it in the context of recounting feelings of exhaustion from being left to co-ordinate (and fight for) supports for their child on their own (Table 7 Quote 11). Teachers and SLTs discussed it in recounting strong feelings of frustration about current service models where children with DLD were described as falling through the gaps.

The stakeholders differed in their views of the role of the SLT in their ideal service. The teachers were very clear that they wanted the SLT physically present and working in the classroom, whereas the SLTs positioned themselves more as ‘advisors.’ In one group, when the SLT and teacher drew a picture of their ideal service and those involved, the teacher insisted that the SLT be moved to the inner circle (Table 8, Quote 12) (where the group had positioned the teacher and child) from an outer one, where the SLT had initially placed herself. The teacher made a clear

distinction between speech and language therapy services where the SLT was minimally involved in a ‘consultative’ role - and their ideal service, where the SLT worked as a *true* collaborator ‘on the ground.’

The parent’s views were aligned with those of the teachers in how responsibility for their child could be shared in their ideal service. They also wanted the SLT to be *in the school* and *working in the classroom* (Table 8, Quote 13). Frustration was expressed by parents and teachers at current ways of working, where parents stated that SLTs ‘passed on their responsibility’ for a child’s language development to school staff.

A final characteristic described by both parents and practitioners related to the values of the ideal organisation in which the service sits. An SLT described an organisation in which the clinical expertise of practitioners is recognised and where they are given the authority to make decisions and to act in the best interest of the child (Table 8, Quote 14).

In this ideal organisation, those providing the service can *respond* easily and quickly to the needs of the service users, as well as to external influences, such as new research findings and/or policy changes (Table 8, Quote 15 & 16). This ideal organisation is focused on relationships between people and strengthening these. Stakeholders were clear that supporting strong relationships across sectors is required if practitioners are to make collaborative decisions, in the best interest of the child. In this ideal service, practitioners would be supported to work beyond the traditional boundaries of an SLT in a health clinic. This would allow the practitioner to meet the needs of the child in the context of their everyday life in school (Table 8, Quote 17 & 18).

Table 8 *Quotes from the data set related to theme 4*

Quote No.	Participant Reference	Quote
1.	P 1	“(the service) it is child-centred so it’s a service where they don’t care about resources or what they’re entitled to, no, they will push the boat out ”
2.	SLT	“...more solutions...more actual support ... so much time is spent finding out what is wrong instead of trying things out that might help”
3.	SLT 5	“.... this service isn’t restricted to his language only but his ability to interact more broadly”
4.	SLT 4	“the service also helps to adapt the environment he is in ... so that he can learn”
5.	P 2	“What about an infinity symbol? ... it’s like a figure of 8 or something...continuity and no break in services”
6.	P 2	“So it’s these arms... that hug that says, we’re there for you, we’re reaching you, we care about you”
7.	SLT 6	“The hand is for helping and a circle all around him (the child). There’s lots of people in his circle, they care”
8.	P 9	“A listening service ... a service that listens to you and respects you as a parent. Parent opinions are heard... everyone has something to bring to the table and everyone’s input needs to be respected equally”
9.	SLT 1	I am putting an ear so that he (the child) is listened to and a speech bubble so he has a voice”
10.	T 5	“they (decisions) are led by child and parent... not the school or the professionals. So they identify what are the difficulties and they decide together how the people should address those difficulties”
11.	P 1	“everything has been a battle from day one. It’s affected my mental health. It has worn me down”
12.	T 5	“The SLT... I want her in... no... inside the inner circle not just in and out but actually getting stuck in to the goings on day to day...sharing the load in the classroom”
13.	P 7	“I just want the SLT in the school. I just want them in.. to be part of it- get stuck in.. helping in there...”

Quote No.	Participant Reference	Quote
14.	SLT 1	“Not a top down service no.. not that... not ‘it is not our policy’ or ‘oh you’ve actually gone above what you’re entitled to’ or ‘this is what we do’ ... more than that... the practitioner being able to decide, cos you know the person best “
15.	P 8	“there is no waiting and the service follows the kid. Like early intervention... the difference is huge.... so not waiting and seeing.. but getting in there quickly”
16.	SLT 7	“..things are continually changing.... like the new oral language curriculum... the service needs to be able to respond to new developments all the time”
17.	P 7	“the service allows the practitioner to be part of it- get stuck in and help him (the child) to fight his corner in there (in school)- in a good way obviously”
18.	P 4	“You can’t learn that (real life skills) in a clinic room.. no way. So in this service she (the practitioner) is able to get really getting messy with it and get into the nitty-gritty with the child...”

Note. P= parent, SLT= speech and language therapist, T= teacher.

Discussion

The aim of this study was to characterise the views of multiple groups of stakeholders when asked to describe their ideal speech and language therapy service for children with DLD in school. We identified convergent and divergent views, within and across the participant groups, about services and supports. We discuss the implications of our findings with reference to the four elements of IPC as described by D’Amour (2008) - shared goals and vision; internalization; formalization; and governance.

The goals of the children differed from those of the practitioners. They were primarily concerned with their social inclusion and participation

in school, consistent with previous studies (Owen *et al.* 2004; Lyons and Roulstone 2017). They described many of the barriers that they faced as a result of their language difficulties on a daily basis; barriers such as the different registers of language used by peers, the ‘hidden curriculum’ through which values, norms and rules in school are tacitly transmitted, and the restrictive rules about how language can be used in the classroom.

The priority goals of the children were to facilitate their inclusion, participation and achievement. This goal cannot be achieved solely by equipping them with the necessary languages skills and tools, but also requires environmental barriers to be addressed. They talked, for example, of support that would help them to learn to speak the language of their peers, and those supports which would help them to understand the implicit rules of the school, as well as the need to create opportunities for them to use language in class for thinking. In contrast, the main goal of supports from the point of view of the practitioners was to improve the language skills of the child. They did not discuss the ways in which the classroom and/or school setting might enable or disable a child with DLD.

There were also differences between the children and practitioners in terms of their vision of the ideal classroom and school. The children provided a clear picture of their ideal classroom setting as one which is inclusive. In this inclusive setting, all children were acknowledged to be different, diversity was celebrated, and children were liked *because* of their differences, rather than *despite* them. The children also described their ideal classroom setting as one where they were given the autonomy to make choices about their learning and where they were enabled to participate. For

them, participation meant being able to contribute to the co-production of ideas. They described ways in which practices in the classroom could be adapted to enable them to do so, such as having a less restrictive classroom discourse. While practitioners did refer to such principles as inclusion, autonomy and participation, they struggled to create a vision of an inclusive classroom and school. For example, having stated the importance of an inclusive setting, they went on to describe their ideal classroom as one in which the child with DLD (who is different to the other children) is successfully integrated;-that is, accepted despite their differences. Similarly, while acknowledging the importance of the child with DLD having autonomy in principle, they did not discuss ways of adapting the classroom and/or teaching so that the child could actually exercise choice. Likewise, whilst discussing the importance of a child being able to participate in school, practitioners did not describe ways in which classroom discourse might be adapted in order to facilitate this. These findings suggest, consistent with the literature, that practitioners may not have a clear understanding of how inclusive principles might be enacted (Florian and Black-Hawkins 2011).

The differences relating to the goals and vision might be due to where the different stakeholder groups '*rest their gaze.*' According to Henderson, cited in Graham (2006), the cause for failing to learn certain skills can be understood in different ways; - viz, due to the 'deficient child' or the 'deficient teacher' (Graham 2006, p.10). Practitioners in this study focused mainly on how support and services can improve the skills of the 'deficient child,' whereas the children were primarily concerned with the

ways in which the environment/ practices is deficient and could be adapted to facilitate their participation and inclusion in school. These stakeholders appear to have a different understanding of both ‘the problem’ and ‘the solution’ in relation to how best children’s language needs can be met in school.

Tangen (2008) offers an explanation for the differing perspectives we identified in this study. She discusses the concept of ‘insider’ knowledge - that which can be gained only through direct experience. The children with DLD in this study brought their unique insider knowledge about the barriers they face in school as a result of their difficulties; yet children with DLD are not routinely included in decisions made about supports to be delivered to them in school (Roulstone *et al.* 2016). The findings of this study show that omitting to include the perspective of the child may result in barriers to their participation and achievement and/or potentially discriminatory practices to remain unchecked.

Professional differences have been discussed in the literature as a barrier to collaboration between SLTs and teachers (McCartney 1999; McCartney 2002), as well as between professionals and parents (Ware 1994). Including the child in decision-making would add further differences in perspective, and power issues related to the status of the child relative to the adults. This requires very careful consideration about how such differences could be acknowledged and managed; - that is, how such differences could be ‘internalised.’

It is important to highlight the agreement we found between all stakeholders about the *nature* of the ideal supports. All participants

described supports which are individually-tailored, enabling and varied. These views are consistent with those of parents reported by Roulstone and Lindsay (2012) and of teachers, reported by Dockrell *et al.* (2012) when describing speech and language therapy services in the UK. The importance of strategies that enable a child to become a more independent learner has also been previously documented (Roulstone *et al.* 2012; Hambly 2014). Such agreement has positive implications for the collaborative process, provided that a set of shared goals and a collective vision can be agreed and differences are managed.

Parents and practitioners were closely aligned in their views when describing their ideal service. They discussed a service in which the quality of relationships is central and where there is an ethic of caring. They characterised their ideal service as a series of collaborative networks which include the service user (parent and child) and service providers (SLTs and teachers). They described collaborative relationships as those in which there is equality and shared responsibility. Shared responsibility, for these stakeholders, meant everyone having a role not just in the planning but in the delivery supports in school and in the classroom.

Formalization of processes and procedures by setting up and strengthening such networks between SLTs, teachers and stakeholders may be a way of improving the quality and effectiveness of collaborative services to schools. Several case studies have been reported that describe different methods of strengthening such networks and the role of leadership in doing so (McPherson *et al.* 2015).

Parents and practitioners also describe a service, which is

responsive, flexible and innovative. These characteristics point to a particular organisational ‘culture’ or set of values, referred to in the literature as ‘adhocratic.’ This culture, according to Ovseiko *et al.* (2015) promotes adaptability and risk-taking at the ‘ground’ level, and is distinguished from a ‘bureaucratic’ one where decisions are made at the ‘top,’ to which workers must adhere.

Historically, attempts at enhancing collaboration between speech and language therapy services and schools have focused on reducing only the structural barriers, without considering cultural factors. In terms of governance then, leadership which promotes such a culture may be warranted and there are tools such as the ‘Competing Values Framework,’ piloted across a wide range of organisational contexts, which could guide SLT managers and school principals in doing this (Hartnell *et al.* 2011).

In summary, the findings of this study show the benefits, not just of including diverse groups of stakeholders in health services research to inform service improvement but also of including these different perspectives in an everyday capacity, when planning the delivery of speech and language therapy supports in school.

Implications for policy

We propose that a key policy implication of the study across health and education is to reinforce the status of the child as a ‘being’ in their own right. This is necessary so that including the child/young person in decisions is a requirement rather than desirable/conditional as is currently the case (Lundy 2007; Shevlin and Rose 2008). This would also move the discourse on from whether or not children should be included, to how this can be

achieved.

A further policy implication is to provide clear guidance around issues of ‘voice’. Whilst ‘giving voice’; - that is, documenting the views of children with DLD has become an increasing focus of speech and language therapy research in the last ten years (Owen *et al.* 2004; Markham *et al.* 2009; Merrick and Roulstone 2011; Roulstone *et al.* 2012; Lyons and Roulstone 2017), we know that children with DLD currently have little genuine ‘influence’ in decisions about the services and supports they receive (Roulstone *et al.* 2016). Lundy (2007) proposes a framework which might guide policy makers in this task. She draws a distinction between giving ‘voice’, ‘space’, ‘audience’, and ‘influence’ and argues that all four are necessary if we are to genuinely include children in decisions that affect their lives.

Implications for practice

In addition to the suggested policy changes above, we propose that practitioners need to learn the skills necessary to ‘*listen*’ to children with DLD. Listening, as defined by Clark (2004) is not the same as extracting information from the child about an adult-led issue. Different methods of listening have been piloted in research with children with communication previously, such as the use of multiple conversations and multi-modal prompting systems (Owen *et al.* 2004; Merrick and Roulstone 2011). Practitioners need to be given the opportunity to learn about these techniques, understand their rationale and to use them as part of their everyday interactions with children.

Giving the child genuine ‘influence’ may also require practitioners

to be open to thinking and/or working in new ways. This is professionally challenging, requiring enhanced clinical reasoning and problem solving skills, a strong sense of self-efficacy and professional autonomy. In planning SLT services, practitioners would need to be supported to work in such a responsive way.

Implications for research

The majority of studies in the field of speech and language therapy are focused on establishing the efficacy of procedures to improve the language skills of the child. The views of the children in this study highlight the need for research to guide SLTs and teachers when considering ways of optimising classroom discourse to enable children with DLD to learn. Whilst there is guidance available to ensure a classroom is ‘communication friendly’ (Dockrell *et al.* 2015a), there is no coherent theoretical framework currently being applied within the field of speech and language therapy that we know of, which enables us to systematically describe and test out ways of adjusting the rules of class talk for children/young people with DLD. An implication for research, then, is the need to consider different methodologies such as sociological approaches to the study of the classroom.

Finally, it is important to add that the desired services and supports described by these stakeholders are in stark contrast to many of the limited models of speech and language therapy support to schools. For many SLTs, ongoing, carefully-planned dialogue (including the child) with the aim of co-configuring individualised supports, delivered in a way which ensures the child’s inclusion and participation is simply not possible. The findings

highlight the need to continue to increase awareness about DLD and to lobby for the necessary resources for SLTs to be able to work in a meaningful way in schools.

Limitations of the study

This is a descriptive study involving the views of a small number of stakeholders. The findings cannot be said to represent the views of teachers, SLTs, parents or children with DLD in general. Instead, we provide a rich description of the ideal service and supports as described by a representative group of individuals, carefully chosen because of their particular knowledge and experience in relation to SLT services and supports, in order for us to develop our understanding of collaboration in this context and to propose ways in which it might be facilitated.

Summary and next steps

We engaged multiple stakeholders in the design of their ideal speech and language therapy service and supports to schools. We found important differences in perspective between the stakeholder groups. Most striking were the unique insights the children brought to the process. They described in detail the many barriers to their achievement, participation and inclusion in school. Further, they were able to describe many practical ways in which these barriers could be addressed and their needs met in an inclusive way;- that is, without setting them apart from their peers. Up until now, studies of collaboration have been limited to understanding what happens between the professionals. We advocate the need, based on our findings, to reframe the process so that the child is given influence in decisions about support in school. In the next phase of our study, we aim to establish consensus about

premises that might underpin a model to guide this inclusive approach to collaboration.

Declarations

Ethics approval and consent to participate

Ethical approval was granted a priori for this study by the Faculty of Education and Health Sciences' Human Research Ethics Committee, at the University of Limerick (ref: 2016_12_15_EHS). Written consent was obtained from the participants in the study.

Consent for publication

Not applicable.

Availability of data and material

Not applicable. Ethics approval for the study requires that data is accessible only to the researchers.

Competing interest

The authors declare that they have no competing interests.

Funding

ALG is a full time PhD scholar on a structured PhD programme in Health Service Research and Population Health, funded by the Health Research Board (SPHeRE/2013/1), Ireland. Funding covers postgraduate fees and a stipend for four years.

Author contributions

ALG drafted the manuscript. CAM, PC and AP have commented on earlier drafts of the manuscript. ALG, CAM, AP and PC all contributed to the design of the main study. ALG facilitated the focus groups and interviews and conducted the analysis. CAM, PC and AP all contributed to the

refinement of the themes. All authors have read and approved the final manuscript.

Acknowledgements

We would like to thank the parents, children, SLTs, and teachers who participated in the study and who provided feedback on the analysis. We would also like to thank Anne O Connor, Áine Kearns and Kathy O Sullivan for their assistance in piloting the focus groups, Molly Manning and Hannah Grove for acting as observers, Noreen Murphy for double-coding and, Katie Robinson for her assistance in generating the themes.

References

- Archibald, L.M. (2017) 'SLP-educator classroom collaboration: A review to inform reason-based practice', *Autism and Developmental Language Impairments* [online], available: <http://dx.doi.org/10.1177/2396941516680369>.
- Bishop, D.V., Adams, C.V. and Rosen, S. (2006) 'Resistance of grammatical impairment to computerized comprehension training in children with specific and non-specific language impairments', *International Journal of Language and Communication Disorders* 41(1), 19-40.
- Bishop, D.V.M. and McDonald, D. (2009) 'Identifying language impairment in children: Combining language test scores with parental report', *International Journal of Language and Communication Disorders*, 44(5), 600-615.
- Bishop, D.V. (2014) 'Ten questions about terminology for children with unexplained language problems', *International Journal of Language and Communication Disorders*, 49(4), 381-415.
- Black - Hawkins, K. (2010) 'The framework for participation: A research tool for exploring the relationship between achievement and inclusion in schools', *International Journal of Research and Method in Education*, 33(1), 21-40.
- Botting, N., Gaynor, M., Tucker, K. and Orchard-Lisle, G. (2015) 'The importance of natural change in planning school-based intervention for children with developmental language impairment (DLI)', *Child Language Teaching and Therapy*, 32(2), 159–177.
- Bowyer-Crane, C., Snowling, M., Duff, F., Fieldsend, E., Carroll, J., Miles, J., Götz, K. and Hulme, C. (2008) 'Improving early language and literacy skills: Differential effects of an oral language versus a phonology with reading intervention', *Journal Of Child Psychology and Psychiatry*, 49(4), 422-32.

- Braun, V. and Clarke, V. (2006) 'Using thematic analysis in psychology', *Quality Research in Psychology*, 3(2),77-101.
- Cirrin, F.M. and Gillam, R.B. (2008) 'Language intervention practices for school-age children with spoken language disorders: A systematic review', *Language, Speech, and Hearing Services in Schools*, 39(1), 110-137.
- Cirrin, F.M., Schooling, T.L., Nelson, N.W., Diehl, S.F., Flynn, P.F., Staskowski, M., Torrey, T.Z. and Adamczyk, D.F. (2010) 'Evidence-based systematic review: Effects of different service delivery models on communication outcomes for elementary school-age children', *Language, Speech, and Hearing Services in Schools*, 41(3), 233-264.
- Clark, A. (2004) *Listening as a way of life: Why and how we listen to young children*, London: National Children's Bureau, available: https://exeter.anglican.org/wp-content/uploads/2014/11/Listening-to-children-leaflet_NCB.pdf [accessed 3 April 2019].
- Climie, E. and Henley, L. (2016) 'A renewed focus on strengths-based assessment in schools', *British Journal of Special Education*, 43(2),108-121.
- Conti-Ramsden, G. and Botting, N. (2008) 'Emotional health in adolescents with and without a history of specific language impairment', *Journal of Child Psychology and Psychiatry*, 49(5), 516-25, available.
- Conti-Ramsden, G. and Durkin, K. (2012) 'Postschool educational and employment experiences of young people with specific language impairment', *Language, Speech, and Hearing Services in Schools*, 43(4), 507-20.
- Cooperrider, D. and Whitney, D.D. (2005) *Appreciative inquiry: A positive revolution in change*, CA: Berrett-Koehler Publishers.
- D'Amour, D., Goulet, L., Labadie, J.-F., Martín-Rodríguez, L.S. and Pineault, R. (2008) 'A model and typology of collaboration between

professionals in healthcare organizations', *BMC Health Services Research* [online], available: <http://dx.doi.org/10.1186/1472-6963-8-188>.

Danforth, S. and Naraian, S. (2015) 'This new field of inclusive education: Beginning a dialogue on conceptual foundations', *Intellectual Developmental Disability*, 53(1), 70-85.

Dean, V.J., Burns, M.K., Grialou, T. and Varro, P.J. (2006) 'Comparison of ecological validity of learning disabilities diagnostic models', *Psychology in the Schools*, 43(2), 157-168.

Dethorne, L.S. and Watkins, R.V. (2006) 'Language abilities and nonverbal iq in children with language impairment: Inconsistency across measures', *Clinical Linguistics and Phonetics*, 20(9), 641-658.

Dockrell, J. and Lindsay, G. (1998) 'The ways in which speech and language difficulties impact on children's access to the curriculum', *Child Language Teaching and Therapy*, 14(2), 117-133.

Dockrell, J., Lindsay, G., Letchford, B. and Mackie, C. (2006) 'Educational provision for children with specific speech and language difficulties: Perspectives of speech and language therapy service managers', *International Journal of Language and Communication Disorders*, 41(4), 423-40.

Dockrell, J., Lindsay, G., Roulstone, S. and Law, J. (2012) *Better communication research programme*, available: <https://www.bettercommunication.org.uk/BCRP/DFE-RR247-BCRP1.pdf> [accessed 2 June 2019].

Dockrell, J., Ricketts, J. and Lindsay, G. (2012) 'Understanding speech, language and communication needs: Profiles of need and provision, available: <https://www.dera.ioe.ac.uk/16322/> [accessed 3 May 2019]

- Dockrell, Lindsay, G., Roulstone, S. and Law, J. (2014) 'Supporting children with speech, language and communication needs: An overview of the results of the better communication research programme', *International Journal of Language and Communication Disorders*, 49(5), 543-557.
- Dockrell, J., Bakopoulou, I., Law, J., Spencer, S. and Lindsay, G. (2015a) 'Capturing communication supporting classrooms: The development of a tool and feasibility study', *Child Language Teaching and Therapy*, 31(3), 271-286.
- Dockrell, J. and Howell, P. (2015b) 'Identifying the challenges and opportunities to meet the needs of children with speech, language and communication difficulties', *British Journal of Special Education*, 42(4), 411-428.
- Dollaghan, C.A. (2011) 'Taxometric analyses of specific language impairment in 6-year-old children', *Journal of Speech, Language, and Hearing Research*, 54(5), 1361-1371.
- Durkin, K. and Conti-Ramsden, G. (2010) 'Young people with specific language impairment: A review of social and emotional functioning in adolescence', *Child Language Teaching and Therapy*, 26(2), 105–121.
- Durkin, K., Simkin, Z., Knox, E. and Conti-Ramsden, G. (2009) 'Specific language impairment and school outcomes ii. Educational context, student satisfaction, and post-compulsory progress', *International Journal of Language and Communication Disorders*, 44(1), 36-55.
- Ebert, K.D. and Kohnert, K. (2009) 'Non-linguistic cognitive treatment for primary language impairment', *Clinical Linguistics and Phonetics*, 23(9), 647-664.
- Einarsdottir, J., Dockett, S. and Perry, B. (2009) 'Making meaning: Children's perspectives expressed through drawings', *Early Child Development and Care*, 179(2), 217-232.

- Feeney, R., Desha, L., Ziviani, J. and Nicholson, J.M. (2012) 'Health-related quality-of-life of children with speech and language difficulties: A review of the literature', *International Journal of Speech- Language Pathology*, 14(1), 59-72.
- Finestack, L.H. and Fey, M.E. (2009) 'Evaluation of a deductive procedure to teach grammatical inflections to children with language impairment', *American Journal of Speech-Language Pathology*, 18(3), 289-302.
- Fletcher, J.M. and Vaughn, S. (2009) 'Response to intervention: Preventing and remediating academic difficulties', *Child Development Perspectives*, 3(1), 30-37.
- Florian, L. and Black-Hawkins, K. (2011) 'Exploring inclusive pedagogy', *British Educational Research Journal*, 37(5), 813-828.
- Fuchs, D., Fuchs, L.S. and Stecker, P.M. (2010) 'The “blurring” of special education in a new continuum of general education placements and services', *Exceptional Children*, 76(3), 301-323.
- Gillam, R.B., Loeb, D.F., Hoffman, L.M., Bohman, T., Champlin, C.A., Thibodeau, L., Widen, J., Brandel, J. and Friel-Patti, S. (2008) 'The efficacy of fast forward language intervention in school-age children with language impairment: A randomized controlled trial', *Journal of Speech, Language, and Hearing Research*, 51(1), 97-119.
- Gillam, S.L., Gillam, R.B., Reece, K., Nippold, M. and Schneider, P. (2012) 'Language outcomes of contextualized and decontextualized language intervention: Results of an early efficacy study', *Language, Speech, and Hearing Services in Schools*, 43(3), 276-291.
- Glover, A., McCormack, J. and Smith-Tamaray, M. (2015) 'Collaboration between teachers and speech and language therapists: Services for primary school children with speech, language and communication needs', *Child Language, Teaching and Therapy*, 31(3), 363-382.

- Gomersall, T., Spencer, S., Basarir, H., Tsuchiya, A., Clegg, J., Sutton, A. and Dickinson, K. (2015) 'Measuring quality of life in children with speech and language difficulties: A systematic review of existing approaches', *International Journal of Language and Communication Disorders*, 50(4), 416-435.
- Graham, L.J. (2006) 'Caught in the net: A foucaultian interrogation of the incidental effects of limited notions of inclusion', *International Journal of Inclusive Education*, 10(1), 3-25.
- Grigorenko, E.L. (2009) 'Dynamic assessment and response to intervention two sides of one coin', *Journal of Learning Disabilities*, 42(2), 111-132.
- Hambly, H. (2014) *Children's, parents', peers' and professionals' experiences of language impairment: A multi-perspective study to identify psychosocial goals for intervention*, unpublished thesis (Ph.D), University of the West of England, available: <https://uwe-repository.worktribe.com/output/817115>.
- Hartas, D. (2004) 'Teacher and speech-language therapist collaboration: Being equal and achieving a common goal?', *Child Language Teaching and Therapy*, 20(1), 33-54.
- Hartnell, C.A., Ou, A.Y. and Kinicki, A. (2011) 'Organizational culture and organizational effectiveness: A meta-analytic investigation of the competing values framework's theoretical suppositions', *Journal of Applied Psychology*, 96(4), 677.
- Hasson, N. and Botting, N. (2010) 'Dynamic assessment of children with language impairments: A pilot study', *Child Language Teaching and Therapy*, 26(3), 249-272.
- Hasson, N. and Joffe, V. (2007) 'The case for dynamic assessment in speech and language therapy', *Child Language Teaching and Therapy*, 23(1), 9-25.

- Hill, V., Croydon, A., Greathead, S., Kenny, L., Yates, R. and Pellicano, E. (2016) 'Research methods for children with multiple needs: Developing techniques to facilitate all children and young people to have a voice', *Educational and Child Psychology*, 33(3), 26-43.
- Hoffman, L.M., Loeb, D.F., Brandel, J. and Gillam, R.B. (2011) 'Concurrent and construct validity of oral language measures with school-age children with specific language impairment', *Journal of Speech, Language, and Hearing Research*, 54(6), 1597-1608.
- Holliday, E.L., Harrison, L.J. and McLeod, S. (2009) 'Listening to children with communication impairment talking through their drawings', *Journal of Early Childhood Research*, 7(3), 244-263.
- Joffe, V.L., Cain, K. and Maric, N. (2007) 'Comprehension problems in children with specific language impairment: Does mental imagery training help?', *International Journal of Language and Communication Disorders*, 42(6), 648-664.
- Johnson, C.J., Beitchman, J.H. and Brownlie, E.B. (2010) 'Twenty-year follow-up of children with and without speech-language impairments: Family, educational, occupational, and quality of life outcomes', *American Journal of Speech-Language Pathology*, 19(1), 51-65.
- Karpov, Y.V. and Tzuriel, D. (2009) 'Dynamic assessment: Progress, problems, and prospects', *Journal of Cognitive Education and Psychology*, 8(3), 228-237.
- Kauffman, J.M. (2007) 'Conceptual models and the future of special education', *Education and Treatment of Children*, 30(4), 241-258.
- Kauffman, J.M. and Konold, T.R. (2007) 'Making sense in education: Pretense (including no child left behind) and realities in rhetoric and policy about schools and schooling', *Exceptionality*, 15(2), 75-96.

- Kouri, T.A., Selle, C.A. and Riley, S.A. (2006) 'Comparison of meaning and graphophonemic feedback strategies for guided reading instruction of children with language delays', *American Journal of Speech-Language Pathology*, 15(3), 236-246.
- Kozulin, A. (2011) 'Learning potential and cognitive modifiability', *Assessment in Education: Principles, Policy and Practice*, 18(2), 169-181.
- Lebeer, J., Birta-Székely, N., Demeter, K., Bohács, K., Candeias, A.A., Sønnesyn, G., Partanen, P. and Dawson, L. (2012) 'Re-assessing the current assessment practice of children with special education needs in Europe', *School Psychology International*, 33(1), 69-92.
- Levy, H. and Friedmann, N. (2009) 'Treatment of syntactic movement in syntactic sli: A case study', *First Language*, 29(1), 15-49.
- Lindsay, G. (2007) 'Educational psychology and the effectiveness of inclusive education/mainstreaming', *British Journal of Educational Psychology*, 77(1), 1-24.
- Lindsay, G. and Strand, S. (2016) 'Children with language impairment: Prevalence, associated difficulties, and ethnic disproportionality in an english population', *Frontiers in Education* [online], available: <http://dx.doi.org/10.3389/feduc.2016.00002>.
- Lundy, L. (2007) '‘Voice’ is not enough: Conceptualising article 12 of the united nations convention on the rights of the child', *British Educational Research Journal*, 33(6), 927-942.
- Lyons, R. and Roulstone, S. (2017) 'Labels, identity and narratives in children with primary speech and language impairments', *International Journal of Speech- Language Pathology*, 19(5), 503-518.

- Madill, A., Jordan, A. and Shirley, C. (2000) 'Objectivity and reliability in qualitative analysis: Realist, contextualist and radical constructionist epistemologies', *British Journal of Psychology*, 91(1), 1-20.
- Markham, C., Laar, D., Gibbard, D. and Dean, T. (2009) 'Children with speech, language and communication needs: Their perceptions of their quality of life', *International Journal of Language and Communication Disorders*, 44(5):748-68.
- Marks, I. and Stokes, S.F. (2010) 'Narrative-based intervention for word-finding difficulties: A case study', *International Journal of Language and Communication Disorders*, 45(5), 586-599.
- Maul, C.A. and Ambler, K.L. (2014) 'Embedding language therapy in dialogic reading to teach morphologic structures to children with language disorders', *Communication Disorders Quarterly*, 35(4), 237-247.
- McArthur, G.M., Ellis, D., Atkinson, C.M. and Coltheart, M. (2008) 'Auditory processing deficits in children with reading and language impairments: Can they (and should they) be treated?', *Cognition*, 107(3), 946-977.
- McCartney, E. (1999) 'Barriers to collaboration: An analysis of systemic barriers to collaboration between teachers and speech and language therapists', *International Journal of Language and Communication Disorders*, 34(4), 431-40.
- McCartney, E. (2002) 'Cross-sector working: Speech and language therapists in education', *Journal of Management in Medicine*, 16(1), 67-77.
- McCartney, E. (2009) 'Joining up working: Terms, types and tensions' in Forbes, J. and Watson, C., eds., *Service integration in schools: Research and policy discourses, practices and future prospects*, Rotterdam: Sense Publishers, 23-36.

- McCartney, E., Boyle, J., Ellis, S., Bannatyne, S. and Turnbull, M. (2011) 'Indirect language therapy for children with persistent language impairment in mainstream primary schools: Outcomes from a cohort intervention', *International Journal of Language and Communication Disorders*, 46(1), 74-82.
- McCartney, E., Ellis, S., Boyle, J., Turnbull, M. and Kerr, J. (2010) 'Developing a language support model for mainstream primary school teachers', *Child Language Teaching and Therapy*, 26(3), 359-374.
- McCartney, E. (2000) 'Include us out? Speech and language therapists' prioritization in mainstream schools', *Child Language Teaching and Therapy*, 16(2), 165-180.
- McKean, C., Law, J., Laing, K., Cockerill, M., Allon-Smith, J. and McCartney, E. (2017) 'A qualitative case study in the social capital of co-professional collaborative co-practice for children with speech, language and communication needs', *International Journal of Language and Communication Disorders*, 52 (4), 514-527.
- McPherson, M.E., Gloor, P.A. and Smith, L.A. (2015) 'Using collaborative improvement and innovation networks to tackle complex population health problems', *JAMA Pediatrics*, 169(8), 709-710.
- Mecrow, C., Beckwith, J. and Klee, T. (2010) 'An exploratory trial of the effectiveness of an enhanced consultative approach to delivering speech and language intervention in schools', *International Journal of Language and Communication Disorders*, 45(3), 354.
- Merrick, R. and Roulstone, S. (2011) 'Children's views of communication and speech-language pathology', *International Journal of Speech-Language Pathology*, 13(4), 281-290.
- Mockford, C., Staniszevska, S., Griffiths, F. and Herron-Marx, S. (2011) 'The impact of patient and public involvement on uk nhs health care:

A systematic review', *International Journal for Quality in Health Care*, 24(1), 28-38.

Nash, H. and Snowling, M. (2006) 'Teaching new words to children with poor existing vocabulary knowledge: A controlled evaluation of the definition and context methods', *International Journal of Language and Communication Disorders*, 41(3), 335-354.

Newman, R.M. and McGregor, K.K. (2006) 'Teachers and laypersons discern quality differences between narratives produced by children with or without sli', *Journal of Speech, Language, and Hearing research*, 49(5), 1022-1036.

Norbury, C.F. and Sparks, A. (2013) 'Difference or disorder? Cultural issues in understanding neurodevelopmental disorders', *Developmental Psychology*, 49(1), 45-58.

Ovseiko, P.V., Melham, K., Fowler, J. and Buchan, A.M. (2015) 'Organisational culture and post-merger integration in an academic health centre: A mixed-methods study', *BMC Health Services Research* [online], available: <http://dx.doi.org/10.1186/s12913-014-0673-3>.

Owen, R., Hayett, L. and Roulstone, S. (2004) 'Children's views of speech and language therapy in school: Consulting children with communication difficulties', *Child Language Teaching and Therapy*, 20(1), 55-73.

Pameijer, N. (2006) 'Towards needs-based assessment: Bridging the gap between assessment and practice', *Educational and Child Psychology*, 23(3), 12.

Phillips, B.M. (2014) 'Promotion of syntactical development and oral comprehension: Development and initial evaluation of a small-group intervention', *Child Language Teaching and Therapy*, 30(1), 63-77.

- Purse, K. and Gardner, H. (2013) 'Does formal assessment of comprehension by SLT agree with teachers' perceptions of functional comprehension skills in the classroom?', *Child Language Teaching and Therapy*, 29(3), 343-357.
- QSR International (2016) *Nvivo qualitative data analysis software* (V.11) [accessed 2 June 2018].
- Reilly, S., Bishop, D.V. and Tomblin, B. (2014) 'Terminological debate over language impairment in children: Forward movement and sticking points', *International Journal of Language and Communication Disorders*, 49(4), 452-62.
- Rice, M.L., Tager-Flusberg, H., Redmond, S.M., Oetting, J.B., McDonald, J.L., Seidel, C.M., Hegarty, M., Paradis, J., Geers, A. and Nicholas, J. (2016) 'Specific language impairment, nonverbal IQ, attention deficit disorder, autistic spectrum disorder, cochlear implants, bilingualism and dialectal variants: Defining the boundaries, clarifying clinical conditions and sorting out causes', *Journal of Speech, Language, and Hearing Research*, 59, 122-132.
- Riches, N.G. (2013) 'Treating the passive in children with specific language impairment: A usage-based approach', *Child Language Teaching and Therapy*, 29(2), 155-169.
- Rix, J., Hall, K., Nind, M., Sheehy, K. and Wearmouth, J. (2009) 'What pedagogical approaches can effectively include children with special educational needs in mainstream classrooms? A systematic literature review', *Support for learning*, 24(2), 86-94.
- Roulstone, S., Coad, J., Ayre, A., Hambly, H. and Lindsay, G. (2012) *The preferred outcomes of children with speech, language and communication needs and their parents*, London: Department of Education, available: <https://www.gov.uk/government/publications/the-preferred-outcomes-of-children-with-speech->

language-and-communication-needs-and-their-parents [accessed 2 May 2019].

Roulstone, S. and Lindsay, G. (2014) *The perspectives of children and young people who have speech, language and communication needs, and their parents*, London: Department of Education, available: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/219633/DFE-RR247-BCRP7.pdf [accessed 2 May 2019].

Roulstone, S., Harding, S. and Morgan, L. (2016) *Exploring the involvement of children and young people who have speech, language and communication needs, and their families in decision-making*, London: Department of Education, available: https://www.thecommunicationtrust.org.uk/media/443274/tct_involvingcyp_research_report_final.pdf [accessed 3 May 2018].

Schmitt, M.B., Justice, L.M., Logan, J.A., Schatschneider, C. and Bartlett, C.W. (2014) 'Do the symptoms of language disorder align with treatment goals? An exploratory study of primary-grade students' IEPs', *Journal of Communication Disorders*, 52, 99-110.

Shevlin, M. and Rose, R. (2008) 'Pupils as partners in education decision - making: Responding to the legislation in england and ireland', *European Journal of Special Needs Education*, 23(4), 423-430.

Smith-Lock, K.M., Leitão, S., Lambert, L., Prior, P., Dunn, A., Cronje, J., Newhouse, S. and Nickels, L. (2013) 'Daily or weekly? The role of treatment frequency in the effectiveness of grammar treatment for children with specific language impairment', *International Journal of Speech- Language Pathology*, 15(3), 255-267.

Smith-Lock, K.M., Leitao, S., Lambert, L. and Nickels, L. (2013) 'Effective intervention for expressive grammar in children with specific language impairment', *International Journal of Language and Communication Disorders*, 48(3), 265-282.

- Starling, J., Munro, N., Togher, L. and Arciuli, J. (2012a) 'Training secondary school teachers in instructional language modification techniques to support adolescents with language impairment: A randomized controlled trial', *Language, Speech, and Hearing Services in Schools*, 43(4), 474-95.
- Tangen, R. (2008) 'Listening to children's voices in educational research: Some theoretical and methodological problems', *European Journal of Special Needs Education*, 23(2), 157-166.
- Threats, T.T. (2006) 'Towards an international framework for communication disorders: Use of the ICF', *Journal of Communication Disorders*, 39(4), 251.
- Throneburg, R.N., Calvert, L.K., Sturm, J.J., Paramboulas, A.A. and Paul, P.J. (2000) 'A comparison of service delivery model effects on curricular vocabulary skills in the school setting', *American Journal of Speech-Language Pathology*, 9(1), 10-20.
- Tomblin, J. (2006) 'A normativist account of language-based learning disability', *Learning Disabilities Research and Practice*, 21 (1), 8-18.
- Tomblin, J.B. and Zhang, X. (2006) 'The dimensionality of language ability in school-age children', *Journal of Speech, Language and Hearing Research*, 49(6), 1193-1208.
- Tommerdahl, J. and Drew, M. (2008) 'Difficulty in sli diagnosis: A case study of identical twins', *Clinical Linguistics and Phonetics*, 22(4-5), 275-282.
- Tong, A., Sainsbury, P. and Craig, J. (2007) 'Consolidated criteria for reporting qualitative research (coreq): A 32-item checklist for interviews and focus groups', *International Journal of Quality Health Care*, 19(6), 349-357.

- United Nations Ministry of Educational, Scientific and Cultural Organization (1994) *The UNESCO salamanca statement*, Paris:UNESCO, available: http://www.unesco.org/education/pdf/SALAMA_E.PDF [accessed 2 May 2019].
- Vangen, S. and Huxham, C. (2013) 'Building and using the theory of collaborative advantage' in Keast, R., Mandell, M. P. and Agranoff, R., eds., *Network theory in the public sector: Building new theoretical frameworks*, New York: Routledge, 51–69.
- Ware, L.P. (1994) 'Contextual barriers to collaboration', *Journal of Educational and Psychological Consultation*, 5(4), 339-357.
- Westerveld, M.F. and Gillon, G.T. (2010) 'Profiling oral narrative ability in young school-aged children', *International Journal of Speech-Language Pathology*, 12(3), 178-189.
- Wickenden, M. (2013) 'Widening the SLP lens: How can we improve the wellbeing of people with communication disabilities globally', *International Journal of Speech- Language Pathology*, 15(1), 14-20.
- Wilson, L., McNeill, B. and Gillon, G.T. (2015) 'The knowledge and perceptions of prospective teachers and speech language therapists in collaborative language and literacy instruction', *Child Language, Teaching and Therapy*, 31(3), 347–362.
- Wolter, J.A. and Green, L. (2013) 'Morphological awareness intervention in school-age children with language and literacy deficits: A case study', *Topics in Language Disorders*, 33(1), 27-41.
- World Health Organization (2002) *Towards a common language for functioning, disability and health: International classification of functioning, disability and health*, Geneva: WHO Press, available: <http://www.Who.Int/classifications/icf/training/icfbeginnersguide.pdf> [accessed 3 Jan 2019].

- World Health Organization (2000) *The world health report 2000. Health systems: Improving performance*, Geneva: WHO Press, available: <https://www.who.int/whr/2000/en/> [accessed 3 Jan 2019].
- World Health Organization (2010) *Framework for action on interprofessional education & collaborative practice*, Geneva: WHO Press, available: https://www.who.int/hrh/resources/framework_action/en/ [accessed 22 Nov 2018].
- World Health Organization (2011) *World report on disability*, Geneva: WHO Press, available: http://www.who.int/disabilities/world_report/2011/en/index.html [accessed 22 Nov 2018].
- Yoder, P., Fey, M.E. and Warren, S.F. (2012) 'Studying the impact of intensity is important but complicated', *International Journal of Speech- Language Pathology*, 14(5), 410-413.
- Zens, N.K., Gillon, G.T. and Moran, C. (2009) 'Effects of phonological awareness and semantic intervention on word-learning in children with SLI', *International Journal of Speech- Language Pathology*, 11(6), 509-24.

Appendix 1: Topic guide (parents and professionals)

Discovery

Question 1:

Can you think for a minute about a time when you accessed a service and it was really, really brilliant. Jot down some details: who was there, what was happening, how you felt, what made it so brilliant. Tell the group all about it? Give us as much detail as you can.

Dream

Question 2:

Now I want to introduce someone to you (prop). His name is Sean. He is 11 years old. He has difficulty understanding instructions, his reading and spelling is poor and he finds friendships hard. It is hard to make out what he is telling you at times. If you had three wishes for Sean in school, what would they be?

Question 3:

Everything you have ever imagined for Sean has come true. I want you to imagine you are looking in the window of the school/classroom. Tell me what you see. Give us as much detail as you can.

Design

Question 4:

Take a minute to look at the flip charts / post-its / your notes/ scribbles, the ideas that we have shared today. Now you need to try to draw a picture of the best speech and language therapy service to school ever. You can use shapes, symbols whatever works for you. You need to draw it rather than use words.

Appendix 2: *Topic guide (children)*

We are going to do three things today.

- **Remember:** The best day ever in school (show symbol)
- **Dream:** I'm going to give you three wishes about school (show symbol)
- **Design:** Then we are going to imagine the wishes have all come true. You can draw the best classroom and school you can imagine (show symbol).

Remember (props: story sequence cards) First, I'd like you to remember.

Can you think of the best day EVER at school? Ok, here is some paper and pens. Can you draw/ write about some things that happened on this day? Here are some things reminders of things to think about when telling a story (use props: 'colourful semantics' cards – what, who, where, when, how feel).

Can you tell me about this day?

Dream (props: 3 blank clouds) Now I am going to give you three wishes about school. Here are your wishes. You can draw on them or write them or talk about them. It is your choice. Can you tell me about your wishes?

Design (props- window, lego man/woman, classroom objects) Now, all your wishes have come true. You are in the best school ever, and all of your wishes have come true. Can you draw one big picture of this school and classroom? (flipchart) You can add things to the classroom. I have some things here that you might find in a classroom you can use or make up your own things?

Possible prompts to ask during or end: (Tell me about the children in this classroom? What are they like? Tell me what is happening? How are they feeling? What are you doing in this classroom? How do you feel in this classroom?) Is there anything else about the best school ever that you can tell me?

Paper IV

Gallagher, A. L., Murphy, CA., Conway, P.F. and Perry, A. (2018)
Listening to children with speech, language and communication needs,
available: <http://www.sphereprogramme.ie/resources/policy-briefs/>.


This policy brief is the fourth of six manuscripts presented as chapters 3-6 of this doctoral thesis. It was conceived and written by the PhD candidate with guidance from Professor Alison Perry, Dr. Carol-Anne Murphy and Professor Paul Conway.

The aim of the brief was to disseminate the findings of the interviews with the children about their ideal services and supports to key policy makers.

Listening to children with speech, language and communication needs

POLICY BRIEF
LISTENING TO CHILDREN WITH SPEECH, LANGUAGE AND
COMMUNICATION NEEDS *

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Context

In Ireland over the past two years there have been significant changes to the way resources are allocated to schools when working with children who have additional needs. There are also significant proposed changes in how therapy services are to be delivered to schools. Combined, these changes create a *unique window of opportunity* to design, plan and deliver collaborative support across health and education. In this policy brief, we describe a study where we engaged a group of children with speech, language and communication needs (SLCN) to design their ideal classroom and school. Our findings show that children bring an essential perspective about how supports can be delivered in school. We call for decision-makers in health and education to ensure that children with SLCN are included decisions about their supports.

Background

The United Nations Convention on Human Rights (UNCHR) states that children with disabilities have the right to be heard on issues that affect them.¹ From this, there is a growing awareness of the importance of rights-based approaches when working with children with additional needs in school.² This year is the *70th anniversary of declaration of human rights* yet children with SLCN are rarely included in decisions about the provision of services and support to meet their needs.


As part of a larger study to improve speech and language therapy services to schools,³ we engaged a group of children with SLCN to describe their 'ideal' classroom.

We propose that our findings have implications for those who are deciding how speech and language therapy services in Irish schools will change.

What we did

We conducted semi-structured interviews with a representative sample of children (girls and boys) with SLCN, between 11 and 13 years across Ireland. We used an approach called 'appreciative inquiry'⁴ in our interviews. This is an approach that can guide individuals to think about the 'best there is.' When planning the interviews, measures were taken to address issues of participation, trust, assent, power and control. The children shared their ideas by drawing pictures, writing as well as verbally. We identified three themes that captured the children's views. The children were sent the findings for checking.


¹See http://www.un.org/disabilities/documents/convention/convention_accessible_pdf.pdf
² Gallagher AL, Tancredi H, Graham LJ. (2018) Advancing the human rights of children with communication needs in school. *International Journal of Speech-Language Pathology* 20:1, pages 128-132.
³See <https://youtu.be/11LVYRrkvuQ>.
⁴ Cooperrider DL, Whitney D. Appreciative inquiry: a positive revolution in change, 2005.




UNIVERSITY OF LIMERICK
SCHOOL OF ALLIED HEALTH




School of Allied Health
EHL
Educational Health & Learning



HRI
Health Research Institute



SPHcRE
Structural Population and
Health-services Research Education



HRB
Health Research Board

What we found

Three themes we identified were:

(i) Ideal support

The children described their ideal support as being individually-tailored to their needs; enabling, enriching and being relevant to their lives at school. They did not want support that set them apart from their peers.

(ii) Priority outcomes

The children wanted to develop tools that enable them to participate, to connect with others, to manage their own learning needs, and to understand the 'unspoken rules' in school.

(iii) Ideal classroom/school setting

The children described their ideal setting as one where it is safe to make mistakes, where they have more control and choice, and where difference is seen as a positive attribute.

"I want to be able to talk, you know like, talking the way they (peers) do, so they will listen and think

"I want the teacher to ask me things... to think I might know the answer"

"In this class, there is more time to talk and more chances to practise talking 'cos it helps you think about things"

What it means

The children in our study were clear that they want to be supported in an inclusive way in school, and not set apart from their peers. They described the ways in which barriers to their learning and participation might be addressed. The findings demonstrate the important knowledge that children with SLCN can bring to decisions about their support.

Summary

If we are to provide support that is meaningful to each child and will prepare them to fulfil their role as citizens in society, then we need to ensure we have effective ways of hearing and attending to their views. To achieve this, we propose three priority recommendations for policy when working with school-aged children with SLCN.

Recommendations

- 1) Reinforce the status of the child in health and education policy, such that their participation in service-planning is mandated.
- 2) Re-evaluate systems and working practices to incorporate the perspectives of children with SLCN.
- 3) Allocate resources to train decision-makers and practitioners in how to listen, so that children with SLCN are given genuine influence in decisions about their support.

We wish to thank the children and families who agreed to be part of this study and the Health Research Board who funded the research under grant no. SPHeRE/2013/1.

Paper V

Gallagher, A. L., Tancredi, H. and Graham, L. J. (2018) 'Advancing the human rights of children with communication needs in school', International Journal of Speech-Language Pathology, 20(1), 128- 132.

This commentary is the fifth of six manuscripts presented in chapters 3-7 of this doctoral thesis. It was conceived and written by the PhD candidate with guidance from Professor Linda Graham and Haley Tancredi.

The aim of the commentary was to propose a model to guide the collaborative practice of SLTs when working in schools with children who have SLCN and to ensure that the views of the child are kept central in decision-making.

Advancing the human rights of children with communication needs in school

Abstract

Article 19 of the Universal Declaration of Human Rights states that everyone has the right to freedom of opinion and expression. However, due to difficulties in communicating, children with speech, language and communication needs (SLCN) are at particular risk of not being heard. Although it is recommended that children with SLCN can and should be actively involved as equal partners in decision-making about their communication needs, speech-language pathologists (SLPs) can lose sight of the importance of supporting communication as a tool for the child to shape and influence choices available to them in their lives. Building these skills is particularly important for SLPs working in mainstream educational contexts. In this commentary, the authors argue the need for a shift in emphasis in current practice to a rights-based approach and for SLPs to take more of an active role in supporting children with SLCN to develop agency and be heard. We also present some concepts and frameworks that might guide SLPs to work in a right-based way in schools with this population.

Keywords: Article 19, Universal Declaration of Human Rights, United Nations, speech language and communication needs, inclusive education, agency.

Introduction

The Universal Declaration of Human Rights has formed the foundation of “freedom, justice and peace” for 70 years (United Nations 1948, p.1). Article 19 of the Declaration states communication, in any mode, is a human right. Subsequent Conventions also state children’s right to communication. For example, Article 12 of the United Nations Convention on the Rights of the Child (1989) names children’s right to expression and opinion about actions affecting them, while Article 13 names a child’s right to expression. Not all children have the capability to fully realise their right to communication. Some children such as those with speech language and communication needs (SLCN) will require additional support to do so.

The right to communication is particularly relevant in the school context because it is the vehicle through which all children, including those with SLCN learn (Lamb *et al.* 2015). The right of children with disabilities to an inclusive education, without discrimination and on the basis of equal opportunity, has since been described in Article 24 of the Convention on the Rights of Persons with Disabilities (United Nations 2006), and recently clarified through General Comment No. 4 (United Nations 2016). It has long been recognised, however, that mainstream curricula, instruction and assessment can present barriers for children with such disabilities to participate in and benefit from their education (Norwich 2013).

Speech-language pathologists (SLPs) are well positioned to support school-aged children with SLCN to enact their human right to communication and to have a voice in issues that affect them in school. There is, however, literature to suggest that the actualisation of these rights

by policy-makers, researchers and professionals – including SLPs – are yet to be fully realised (Coppock and Gillett-Swan 2016). In this commentary, we consider ways that SLPs can work to support children with SLCN and their teachers to identify and address barriers to communication, as well as to build the communication skills necessary for such children to develop agency. Such an approach can enable full access to learning and participation in education, thereby ensuring the child's human rights are fully realised.

The role of SLPs in the school context

In the last 20 years, the work of SLPs has seen a shift from a purely medical model to a biopsychosocial one (Nippold 2012). This is evidenced by current guidelines that inform practice (World Health Organization 2007; American Speech-Language- Hearing Association 2010; Speech Pathology Australia 2011; Royal College of Speech and Language Therapists 2016) where in addition to describing and remediating SLCN, the participation of the child is also maximised. We, however, challenge the degree to which emphasis is placed on the participation in practice. This means there is a risk that the rights of children with SLCN may not be fully realised.

Despite an understanding that interview forms part of holistic assessment (Joffe *et al.* 2012), for example, findings from a review of assessment practices revealed that the sole use of psychometric testing remains the most common approach used by professionals such as SLPs (Lebeer *et al.* 2012). Furthermore, a national review of SLP services in the United Kingdom highlighted that SLPs do not always engage children in decision-making (Roulstone and Lindsay 2012; Dockrell *et al.* 2014), despite

the fact that children with SLCN have been shown to be able to reflect on their communication profile (Spencer *et al.* 2010; Merrick and Roulstone 2011). SLPs are well-positioned to ensure the views and preferences of the child are included in such processes but to do so they must think beyond diagnosis and remediation and overcome what Minow (1990) describes as the “dilemma of difference.”

The dilemma of difference

The process of diagnosing SLCN requires SLPs to identify, understand and attempt to address differences between a child and their peers. While this process has merit in allowing the development of targeted interventions and responsive classroom practices, it also risks stigmatisation, formation of assumptions about a child’s potential, and their possible realisation through the self-fulfilling prophecy of lower expectations (Graham and Slee 2008). The alternative, however, is to deny difference and herein lies the dilemma. The risk of not identifying difference is that children are unlikely to receive the requisite support for access and participation. The challenge for SLPs is how to identify and support children with SLCN without contributing to stigmatisation, exclusion and/or the reduction of expectations.

Much work remains to be done in addressing this challenge. Large-scale international surveys of SLP practice in schools show that withdrawal intervention is the dominant model of service delivery (Brandel and Loeb 2011). This model has been criticized in the inclusive education research literature and not just because it emphasises individual difference and risks stigmatization (Norwich 2013). Withdrawal is considered problematic because it: (1) leaves mainstream educational practices that create barriers to

children's access and participation in place, (2) reduces exposure to the full school curriculum, (3) suggests that children's needs cannot be met in the regular classroom, and (4) fails to positively enhance the knowledge and skills of the classroom teacher. None of the above effects are consistent with a rights-based approach where children with SLCN are learning the communication skills needed to maximise agency and participation in school.

Thinking beyond remediation

Fundamental to trying to work in a rights-based way is ensuring children with SLCN can exercise *agency* in their own lives. Here we are drawing on ideas from continental and political philosophy and more specifically, Sen's concept of agency freedom (Sen 1990). In accordance with this view of agency, genuine freedom only exists when people are informed, understand what choices are possible, and can choose from options of their own making. This is different from choosing from a limited set of choices, prescribed by others (Graham 2007), or being provided with "opportunities" that one cannot access or gain advantage from (Sen 1992). For children with SLCN, there is the potential that SLPs and teachers determine the options from which children can choose. Similarly, the practice of withdrawing children for intervention is unhelpful when, on returning to class, barriers to access remain.

Clearly for children with SLCN to express preferences, negotiate and influence the choices available to them, they need the communication skills to do so. We are not arguing that improving the child's language skills is not necessary. Rather, the way SLPs approach their work needs to be extended to directly supporting the child to learn to use communication

skills to shape and influence in their lives. Research has shown that children with SLCN want to be engaged in decision-making (Roulstone *et al.* 2016). To do so, SLPs must listen to children with SLCN, partner with teachers and build children's communication skills using a rights-based approach.

Central elements for a rights-based approach

As we have described, the aim of a rights-based approach to working with children with SLCN is to develop agentic capacity to enable children to realise their rights. We propose three central elements of practice: (1) SLPs and teachers listen to children with SLCN, (2) SLPs and teachers collaborate to maximise children's participation and, (3) SLPs work to build communication skills using a capabilities approach. The relationship between these elements and their contribution to the development of agency is depicted in Figure 1.

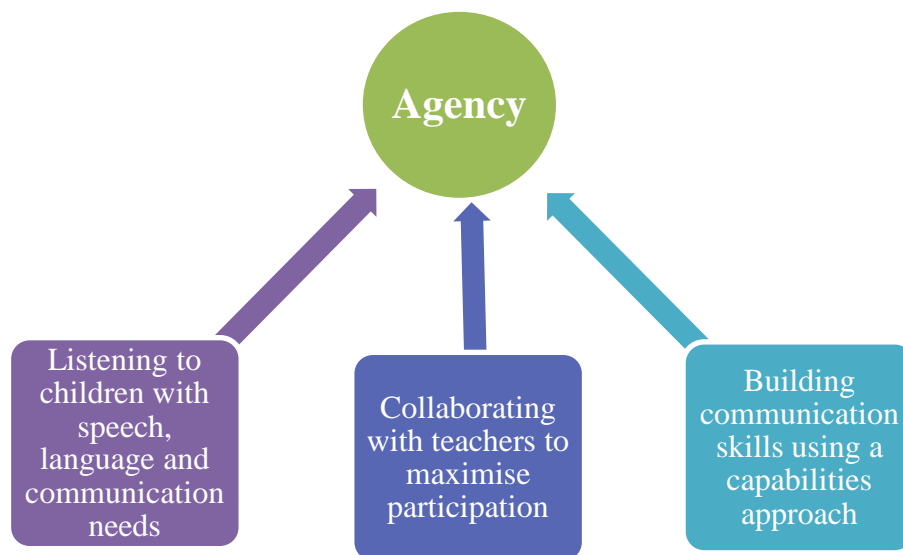


Figure 1. Central elements for a rights-based approach to working with children in school who have speech, language and communication needs.

Listening to children with SLCN

Working in a rights-based way requires the SLP to rethink the act of listening. Listening to children with SLCN has received attention in the research literature (Roulstone and McLeod 2011; Lyons and Roulstone 2017) and the complexities that teachers and SLPs face in genuinely hearing and responding to children with SLCN are significant. By listening we don't mean listening as a means to "extract information from children in a one-way event" but as a "dynamic process which involves children and adults discussing meanings" (Clark 2005, p.491). In doing so SLPs must avoid the urge to "grasp the other and make them the same" (Lancaster and Kirby 2010, p.13). This advice is relevant to working with all children but particularly so for children with SLCN who may not be able to impart "meaning" in a readily accessible way. Strategies to support listening might include using multiple conversations and multi-modal prompting systems (Owen *et al.* 2004; Merrick and Roulstone 2011), which enhance access to the communication partner's message and give children with SLCN multiple opportunities to expand their ideas. Indeed, providing accessible and interactive materials for children with SLCN to use when contributing to decision-making was recommended in a recent report by The Communication Trust (Roulstone *et al.* 2016).

Collaborating with teachers

The ability to listen and respond to the needs of children with SLCN in school is dependent on effective SLP/teacher collaboration. Here, SLPs must shift away from the role of "expert" to one as collaborator. D'Amour *et al.* (2005) describe collaboration as an evolving process, grounded in the

concepts of equality, sharing, partnership, power and interdependence. As collaborators, SLPs are not in a position of “advice giving”, but instead are equal partners in the everyday work of classrooms. As part of the planning and assessment process, SLPs and teachers working together can identify and minimise/remove barriers that may exist for a child with SLCN in accessing the communication or curricular content of the classroom. In collaborating, SLPs and teachers can work to maximise agency for children with SLCN and thereby uphold their rights to communication and an inclusive education. Whilst increasingly, SLTs are engaging in collaborative models of service delivery (Archibald 2017), many barriers to such working still exist (McCartney and Ellis 2013).

Collaborative conversations can be guided by tools such as the Framework for Participation (Black-Hawkins *et al.* 2016), which describes key questions across four domains (Participation and Access, Collaboration, Achievement, and Diversity). We provide an adapted version of the framework (see appendix) which can be used as a tool by teachers and SLPs to consider current practices and potential barriers that might exist for children with SLCN and to measure progress in reducing such barriers. Such a framework can also be used to guide conversations with the child him/herself to ensure their perspectives of the barriers they face are included in such conversations.

A capabilities approach to building communication skills

In inclusive classrooms curriculum, pedagogy and effective instruction are the means through which the child accesses and demonstrates their learning. Due to difficulties such as SLCN, purely language-based

tasks will mean that not all learners will equally convert learning to ends such as academic achievement and engagement. In order to uphold a child's right to an inclusive education and their right to communicate within an education setting, multiple means to representing information, engaging learners and capturing a child's learning is necessary. Universal Design for Learning (UDL) is a framework used in inclusive settings to engage the child in their learning, deliver dynamic instruction, and provide opportunities for the child to demonstrate their learning through a range of modes (Rose and Meyer 2002). In contrast to traditional differentiation practices, UDL promotes that a variety of learning and teaching options are designed from the outset of planning, to consider diverse learning needs within a classroom. Using this framework when collaborating with teachers may support SLPs to capture and respond to the child's perspectives and allow the child to communicate what helps and hinders them in accessing their education.

Conclusions

The 70th anniversary of the Universal Declaration of Human Rights provides SLPs working in schools with an opportunity to pause and consider ways in which they can further protect and advance the right to communication for children with SLCN. In this commentary, we have reflected on the ways SLPs currently work in schools with children who have SLCN. We suggest a shift in emphasis is required if SLPs are to ensure the right of children to communication is fully realised. We propose some concepts and frameworks that might support SLPs to work in schools with children with SLCN in a way that is more aligned with the social and legal

values enshrined in the Declaration. We acknowledge that a rights-based approach is challenging, but we argue that as a profession, SLPs are uniquely-placed to overcome such challenges.

References

- American Speech-Language-Hearing Association (2010) Roles and responsibilities of speech-language pathologists in schools, available: <https://www.asha.org/policy/PI2010-00317/> [accessed 3 Aug 2019].
- Archibald, L.M. (2017) 'SLP-educator classroom collaboration: A review to inform reason-based practice', *Autism and Developmental Language Impairments* [online], available: <http://dx.doi.org/10.1177/2396941516680369>.
- Black-Hawkins, K., Florian, L. and Rouse, M. (2016) *Achievement and inclusion in schools*, London: Routledge.
- Brandel, J. and Loeb, D. (2011) 'Program intensity and service delivery models in the schools: SLP survey results', *Language, Speech and Hearing Services in Schools*, 42(4), 461-90.
- Clark, A. (2005) 'Listening to and involving young children: A review of research and practice', *Early Child Development and Care*, 175(6), 489-505.
- Coppock, V. and Gillett-Swan, J. (2016) 'Introduction: Children's rights, educational research and the UNRC' Gillett-Swan, J. and Coppock, V., eds., *Children's rights educational research and the UNCRC*, Oxford: Symposium Books, 7-16.
- D'Amour, D., Ferrada-Videla, M., Rodriguez, L.S.M. and Beaulieu, M.-D. (2005a) 'The conceptual basis for interprofessional collaboration: Core concepts and theoretical frameworks', *Journal of Interprofessional Care*, 19(1), 116-131.
- Dockrell, Lindsay, G., Roulstone, S. and Law, J. (2014a) 'Supporting children with speech, language and communication needs: An overview of the results of the better communication research programme', *International Journal of Language and Communication Disorders*, 49 (5), 543-557.

- Graham, L.J. (2007) 'Towards equity in the futures market: Curriculum as a condition of access', *Policy Futures in Education*, 5(4), 535-555.
- Graham, L.J. and Slee, R. (2008) 'An illusory interiority: Interrogating the discourse/s of inclusion', *Educational Philosophy and Theory*, 40(2), 277-293.
- Joffe, V.L., Nippold, M.A. and Oetting, J. (2012) 'Progress in understanding adolescent language disorders', *Language, Speech and Hearing Services in Schools*, 43(4), 438-444.
- Lamb, S., Jackson, J., Walstab, A. and Huo, S. (2015) *Educational opportunity in australia 2015: Who succeeds and who misses out*, available: <https://www.vu.edu.au/news-events/news/educational-opportunity-in-australia-2015-report-who-succeeds-and-who-misses-out> [accessed 3 Aug 2019].
- Lancaster, Y.P. and Kirby, P. (2010) *Listening to young children*, London: McGraw-Hill Education.
- Lebeer, J., Birta-Székely, N., Demeter, K., Bohács, K., Candeias, A.A., Sønnesyn, G., Partanen, P. and Dawson, L. (2012) 'Re-assessing the current assessment practice of children with special education needs in Europe', *School Psychology International*, 33(1), 69-92.
- Lyons, R. and Roulstone, S. (2017) 'Labels, identity and narratives in children with primary speech and language impairments', *International Journal of Speech-Language Pathology* [online], available: <https://dx.doi.org/10.1080/17549507.2016.1221455>.
- McCartney, E. and Ellis, S. (2013) 'The linguistically aware teacher and the teacher-aware linguist', *Clinical Linguistics and Phonetics*, 27(6), 419-427.
- Merrick, R. and Roulstone, S. (2011) 'Children's views of communication and speech-language pathology', *International Journal of Speech-Language Pathology*, 13(4), 281-290.

- Minow, M. (1990) *Making all the difference: Inclusion, exclusion, and American law*, New York: Cornell University Press.
- Nippold, M.A. (2012) 'Times change and we with them', *Language, Speech and Hearing Services in Schools*, 43(4), 393-394.
- Norwich, B. (2013) *Addressing tensions and dilemmas in inclusive education: Living with uncertainty*, London: Routledge.
- Owen, R., Hayett, L. and Roulstone, S. (2004) 'Children's views of speech and language therapy in school: Consulting children with communication difficulties', *Child Language Teaching and Therapy*, 20(1), 55-73.
- Rose, D.H. and Meyer, A. (2002) *Teaching every student in the digital age: Universal design for learning*, Alexandria, VA: Association for Supervision & Curriculum Development, available: <http://dx.doi.org/10.1177/016264340101600208>.
- Roulstone, S. and McLeod, S. (2011) *Listening to children and young people with speech, language and communication needs*, London: J & R Press Limited.
- Roulstone, S., Coad, J., Ayre, A., Hambly, H. and Lindsay, G. (2012) *The preferred outcomes of children with speech, language and communication needs and their parents*, London: Department of Education, available: <https://www.gov.uk/government/publications/the-preferred-outcomes-of-children-with-speech-language-and-communication-needs-and-their-parents> [accessed 2 May 2019].
- Roulstone, S. and Lindsay, G. (2014) *The perspectives of children and young people who have speech, language and communication needs, and their parents*, London: Department of Education, available: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/219633/DFE-RR247-BCRP7.pdf [accessed 2 May 2019].

Roulstone, S., Harding, S., and Morgan, L. (2016) *Exploring the involvement of children and young people who have speech, language and communication needs, and their families in decision-making*, London: Department of Education, available: https://www.thecommunicationtrust.org.uk/media/443274/tct_involvingcyp_research_report_final.pdf [accessed 3 Aug 2019].

Royal College of Speech and Language Therapists (2016) *Speech and language therapists in schools*, available: https://www.rcslt.org/members/slots_in_schools/role_of_the_slts [accessed 20 June 2019].

Sen, A. (1990) 'Justice: Means versus freedoms', *Philosophy and Public Affairs*, 19(2), 111-121.

Sen, A. (1992) *Inequality re-examined*, Cambridge: Harvard University Press.

Speech Pathology Australia (2011) *Speech pathology services in schools*, available: <https://www.speakingoflearning.com.au/uploads/105/49/Sevices-in-Schools-Position-Statement.pdf> [accessed 1 Aug 2019].

Spencer, S., Clegg, J. and Stackhouse, J. (2010) 'I don't come out with big words like other people': Interviewing adolescents as part of communication profiling', *Child Language Teaching and Therapy*, 26(2), 144-162.

United Nations (1948) *Universal declaration of human rights*, available: <https://www.un.org/en/universal-declaration-human-rights/> [accessed 3 Feb 2019].

United Nations (1989) *Convention on the rights of the child*, available: <http://www2.ohchr.org/english/law/pdf/crc.pdf> [accessed 3 June 2018].

United Nations Committee on the Rights of Persons and a Disability (2016) *Article 14: Right to inclusive education*, available:

<https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities/article-24-education.html>
[accessed 3 Feb 2019].

World Health Organization (2002) *Towards a common language for functioning, disability and health: International classification of functioning, disability and health*, Geneva: WHO Press, available: <http://www.Who.Int/classifications/icf/training/icfbeginnersguide.pdf>
f/[accessed 3 Jan 2019].

Appendix: *Describing inclusive participation for children with speech, language and communication needs*

Direct observation can be undertaken in relation to the points below in order to identify potential barriers to participation, options for how barriers could be addressed and evidence of change over time.

<p>Participation and ACCESS: how is the child with SLCN given access in class?</p> <ul style="list-style-type: none"> • How does the child join the school and classroom? • When does the child stay in the school and classroom? • Describe the child's access to communicate in places in the school and classroom • How does the child access the curriculum? • Describe what policies, practices and interactions promote or reinforce barriers to access. 	<p>Participation and COLLABORATION: how do those supporting the child with SLCN learn and work together?</p> <ul style="list-style-type: none"> • Who is currently collaborating to support the child? • What are the goals for collaboration? • What are the roles of the various collaborators? • How can stakeholders access or learn new information? • Describe the policies, practices and interactions that promote or reinforce barriers to collaboration.
<p>Participation and ACHIEVEMENT: supporting the learning of the child with SLCN</p> <ul style="list-style-type: none"> • Progress in learning as an everyday expectation. • Achievements are valued and rewarded. • There is a focus on what the child can do rather than what they cannot • Formative assessment is used to support learning • Describe the policies, practices and interactions that promote or reinforce barriers to achievement. 	<p>Participation and DIVERSITY: supporting the learning of the child with SLCN</p> <ul style="list-style-type: none"> • Children's communication diversity is recognised and accepted by staff. • Staff member's communication diversity is recognised and accepted by staff. • Children's communication diversity is recognised and accepted by other children. • Describe the policies, practices and interactions that promote or reinforce barriers to recognition and acceptance.

Adapted from Achievement and inclusion in schools (p. 48) by L. Florian, K. Black-Hawkins, & M. Rouse, 2016. New York, USA: Routledge.

Chapter 6

Paper VI

Gallagher, A. L., Murphy, CA., Conway, P.F. and Perry, A. (2019) 'Establishing premises to inform collaborative practice when supporting children and young people with a developmental language disorder in school: a Delphi study', Submitted to Disability and Rehabilitation, under review.

This is the final of six manuscripts presented in chapters 3-6 of the doctoral thesis. In the paper, the findings of a Delphi study are reported. The paper was conceived and written by the PhD candidate with guidance from Professor Alison Perry, Dr. Carol-Anne Murphy and Professor Paul Conway. The aim of the Delphi study was to establish agreement across stakeholder groups about contentious topics identified in earlier phases of the research to inform the premises for collaborative practice.

Specific research questions to be addressed included:

- (i) Based on the findings from an integrative review of the literature and the focus groups and interviews with stakeholders, what topics are most contentious across stakeholders?
- (ii) Can agreement be reached on these topics?
- (iii) What are the key premises to underpin SLT-teacher collaboration with school children who have DLD?

Establishing premises to inform collaborative practice when supporting children and young people with a developmental language disorder in school: A Delphi study

Abstract

Purpose

We ascertained stakeholders' agreement and disagreement about collaboration when supporting children with a developmental language disorder (DLD) in school in order to establish premises to inform practice.

Materials and methods

Two rounds of an online Delphi survey were undertaken with a purposive sample of 26 participants comprising researchers, practitioners and service users. Statements in the survey were informed by two earlier phases of our research. Agreement was set at an inter-quartile range of 1, with level of agreement measured using a five-point semantic differential scale. Content analysis was used to examine the qualitative data.

Results

After round 2, participants agreed that the child with DLD should be given influence in decision-making about support and goals of collaboration. Agreement was not reached about the need for individual intervention outside of the classroom. This was due to perceived inadequacies in current supports/services, rather than views about the nature of DLD.

Conclusions

Three premises to inform practice were established: the child with DLD is a being in their own right; DLD is a difference rather than a disorder; and

collaboration ensures the inclusion of the child with DLD in school. Key implications of the findings are outlined.

Key words: inter-professional collaboration, .developmental language disorder, Delphi, parents, teachers, speech and language therapists,

Introduction

At least two in any classroom of thirty children have difficulty learning language, without any obvious cause (Tomblin *et al.* 1997; Law *et al.* 2000a). This condition, called a “developmental language disorder” or DLD, is unlikely to resolve spontaneously. Those affected have been shown to struggle to gain employment, to live independently and to maintain good mental health as adults (Law *et al.* 2009; Conti-Ramsden and Durkin 2012). The school years are particularly challenging for a child with a DLD because language is not just essential for communicating, but also plays a central role in teaching and learning (Dockrell and Lindsay 1998).

For decades, in policy and professional guidelines, inter-professional collaboration (IPC) between speech and language therapists (SLTs) and teachers has been recommended as the optimal means by which the needs of the child with DLD can be met in school (Rix *et al.* 2013; Royal College of Speech and Language Therapists 2016). Yet, according to surveys of speech and language therapy practice in schools, working with the child outside the classroom is the most common model (Brandel and Loeb 2011; Glover *et al.* 2015). A lack of shared understanding between SLTs and teachers about DLD has been widely identified as a potential barrier to IPC in this context (McCartney 1999; McCartney 2009; McKean *et al.* 2017).

In this paper we report the findings from the last of a three-phased study aimed at developing agreed premises to underpin the collaborative practice of SLTs and teachers when supporting children with DLD in school. The conceptual framework for this study was guided by the work of D’amour *et al.* (D’Amour *et al.* 2005; San Martín-Rodríguez *et al.* 2005;

D'Amour *et al.* 2008) who proposed that four elements - “shared goals and vision,” “internalization” (an understanding of the professional differences between those involved) and a “client-centred orientation” (the extent to which the needs of the service user are kept central to healthcare planning and intervention) - are essential for effective IPC in practice.

In the first phase of the study, we conducted an integrative review of empirical and theoretical literature across the fields of speech and language therapy and education to examine the evidence for a shared conceptual understanding about DLD to inform the development of the premises (Gallagher *et al.* 2019a). Although we identified shared views, it was the differences in perspectives which predominated. These differences related to assumptions about DLD, the prioritisation of outcomes and how such outcomes can be achieved in school.

We next asked a cohort of SLTs and teachers working with children who have DLD, the parents of children with DLD and the children themselves, to describe the ‘optimal’ or ‘ideal’ speech and language therapy support in school and these data also informed the model (Gallagher *et al.* 2019b). Again, clear differences in perspective were identified; the most striking were between the views of the practitioners and of the children with DLD.

Grunwell (1983) discussed the importance of establishing *premises*¹ when differing approaches are evident in clinical practice, as a foundation upon which to derive suitable interventions. The marked differences in perspective that we identified in both our earlier studies highlighted the

¹ Grunwell defines premises as “*primary, in that they state the fundamental theoretical framework underlying a therapeutic approach*” [18, p.161].

need to establish agreed premises about DLD and IPC across key stakeholder groups (SLTs, teachers, parents of, and children with, DLD).

Aims

This study was designed to identify agreement and disagreement across stakeholders about three topics related to collaboration when supporting children with DLD in school, and the reasons that stakeholders held such views. Findings were then used to develop a set of premises to underpin a model to inform collaborative practice. The topics chosen were those identified as contentious in the earlier studies. These included:

- (i) The role of the child with DLD in decision-making about support
- (ii) Assumptions about DLD
- (iii) The goals of collaboration

Materials and Methods

Ethics

Ethical approval was granted a priori for this study by the Faculty of Education and Health Sciences' Human Research Ethics Committee at the University of Limerick (2016_12_15_EHS).

Design

A Delphi method is a forecasting process framework, based on the results of multiple rounds of questionnaires sent to a panel of experts. Several rounds of questionnaires are sent out to the group of experts, and their anonymous responses are aggregated and shared with the group after each round.

This methodology is effective when seeking consensus from a group of informed individuals about a complex practice issue and it allows the researcher to explore underlying assumptions that have led to differing judgements (Rowe and Wright 2011). A strength of the Delphi method ensures equal status can be given to all participants, which was important in this study as parents were included, as well as practitioners and researchers (Bolger and Wright 2011). The Delphi method also allows anonymity for participants, ensuring that they can give their views freely without feeling obliged to agree with the views of others (Powell 2003). This was particularly relevant to this study, as some of the topics were vulnerable to social response bias -i.e., the tendency of participants to choose responses they believe to be more socially desirable.

Participants

Guided by the recommendation that a sample of no more than 30 participants should be recruited when undertaking a Delphi procedure (Hsu and Sandford 2007), we recruited a purposive sample of 24 participants. One inclusion criterion was that participants had not been involved in previous phases of this research, but had knowledge of DLD and/or were working in school with children who have DLD. Initially a “knowledge resource nomination worksheet” (Okoli and Pawlowski 2004) was developed by the authors – i.e., a list of inclusion criteria for each participant group so that potential participants could be assessed against these before selection (see appendix).

The 24 participants included eight researchers, eight practitioners and eight parents. Researchers and practitioners were recruited from across

the fields of speech and language therapy and education. Practitioners and parents of children with DLD needed to have experience of accessing and/or of providing a range of speech and language therapy services, including from primary care, mainstream school, and language classes.² Recruitment of parents and practitioners was extended to parts of the UK as well as Ireland in order to source sufficient participants who had provided, or accessed, school-based speech and language therapy services, as such services are not currently well-established in Ireland.

Recruitment

To source research-active professionals, electronic searches of peer-reviewed papers were conducted and contact details of suitable authors were identified. Practitioners (SLTs and teachers) were recruited through pertinent professional networks/ associations. Identified researchers and practitioners who met the criteria for recruitment were first contacted by email. A poster, summarising the purpose of the research and what was required of participants, was supplied. Follow up phone/ e-mail contact was offered to discuss any issues related to the study.

Parents were recruited by circulating posters to established parent groups/organisations and through social media. Interested parents were invited to contact Researcher 1 by phone or e-mail. Parents had the opportunity to discuss the study and their involvement by phone before deciding whether or not they wished to participate in the study. Those who agreed to take part were then sent a link to the survey by email. If a

² A language class is a 'special' class with reduced numbers of children, in a mainstream school in Ireland, all of whom have severe DLD. Children can attend such a class for a maximum of two years during the primary school years.

participant then declined to take part, they were asked to suggest another possible respondent who met the criteria for inclusion.

Data collection and analysis

Two rounds of an online survey were conducted using Questionpro[®] (2017) - an online survey tool. Author 1 conducted the study and managed the process. Agreement was considered to have been reached if responses to a statement, across all participants, fell within an inter-quartile range (IQR) of 1. A level of dispersion measure was used as, according to von der Gracht (2012), it is an objective and rigorous way to measure consensus.

Round 1 of the survey was open for two weeks. Participants were presented with a series of statements and asked the extent to which they agreed with each one, choosing from a five point semantic differential scale (1=strongly disagree to 5= strongly agree). Because many of the statements were abstract in nature, explanatory notes and practice scenarios were provided, to enhance clarity. Participants were requested to provide reasons for their decisions.

At the end of round 1, descriptive statistics (% of responses, IQR, median) were calculated for each statement and key categories from the qualitative data provided by the participants were summarised. All statements where there was agreement were then removed and the remaining statements, where agreement had not been achieved, were re-presented to the participants as round 2.

In round 2, participants were given the overall results of the first round (% of participants who agreed/ disagreed/ were undecided, together with the median score and IQR), their own score, and a summary report of

the comments received from round 1 for each statement. Participants were then asked to reconsider their own statements in light of the feedback and invited to state whether or not their views had changed from round 1 and, if so, why.

Prior to each round, the survey was tested with a researcher, a practitioner and a parent of a child with DLD not involved in the study, to ensure clarity of the questions. To enhance rigour a second researcher, not involved with the previous studies, summarised the feedback between rounds, independently of Author 1. The second researcher was a PhD student undertaking another health-related qualitative research study.

Statements for the survey

Figure 1 presents the sources of data, key findings, topics of interest and related concepts used to develop the statements for the survey.

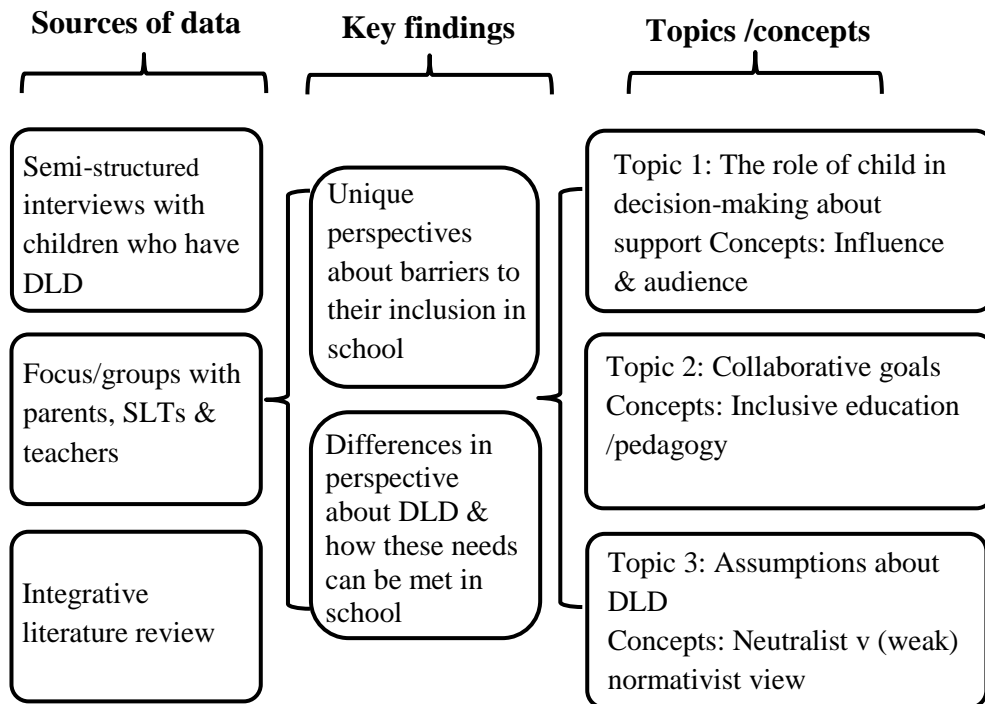


Figure 1. Development of statements for the Delphi study.

Topic one was about the role of the child in decision-making about support. Statements were informed by the work of Lundy (2007). Concepts included “voice” (being facilitated to express one’s views), “audience” (being listened to by those who are able to affect change), and “influence” (the child’s views being acted upon, as appropriate). Topic two related to differing views of DLD, based on the work of Tomblin (2006). These include a “neutralist” view, where the child’s language difficulties are sufficiently different to be considered a disease requiring specific treatment.

This view assumes that a diagnosis of DLD is based on objective data and that the diagnosis holds true, regardless of the context in which an individual functions. By contrast, a “normativist” view of DLD acknowledges that opinions about what constitutes a problem in a child’s development are subjective and contextually-sensitive. Tomblin (2006) proposes a “weak normativist” view, acknowledging the subjective nature of judgements about developmental differences, but recognising the need to understand these individual differences using theories of language disorder. Topic three related to collaborative goals that are aligned with inclusive education and, more specifically, with inclusive pedagogy in the classroom. Inclusive pedagogy is defined by Florian and Black-Hawkins (2011, p.184) as an approach in which “teachers respond to individual differences between learners, but avoid the marginalisation that can occur when some students are treated differently.”

Results

Participants

Twenty six participants were recruited to the study, 25 females and 1 male, with equal numbers of practitioners and researchers across speech and therapy and education. Two additional parents were recruited (n =10), in order to include the perspective of those with experience of accessing services in secondary school as well as primary school. Of the parents recruited, eight had between one and five years of experience in accessing speech and language therapy services, and two parents had five or more years’ experience. Two parents lived in the UK and the remaining eight in Ireland.

Of the eight practitioners who participated, one had less than five years' experience and seven had over five years practice experience in collaborative planning and/or delivery of support to school-aged children with DLD. Five practitioners were from Ireland, two were UK-based and one was from Finland (recommended by a potential participant contacted, who was unable to complete the survey). Two SLTs who participated in the study worked in a language class, five SLTs worked directly in schools, and one SLT worked in primary care services. Teachers recruited to the study included: a special educational needs co-ordinator³, a special education teacher⁴, a class teacher, and a principal of a school. Researchers were from Ireland, UK, Canada and Australia. Twenty six participants completed round 1- ten parents, eight practitioners and eight researchers - and 25 completed round 2. One teacher did not complete round 2 due to a stated "busy workload." See Table 1 for participant details.

³ A special educational needs co-ordinator (SENO) is responsible at a school-wide level for organising supports to children/ young people with additional needs in Irish schools.

⁴ A special education teacher (SET) is responsible for the delivery of interventions as needed to children/young people with additional needs in Irish schools.

Table 1 *Details of the participants in the study*

Descriptor		Parent	Practitioner	Researcher
N:	Total	10	8	8
	Female	10	8	7
Discipline:	Education	-	4	4
	Speech and	-	4	4
Country:	Ireland	8	5	4
	UK	2	2	2
	Canada	0	0	1
	Finland	0	1	0
	Australia	0	0	1
Work setting:	University/research	-	0	8
	Language class	-	2	0
	Mainstream school	-	5	0
	Primary care	-	1	0
Current role:	Researcher/lecturer	-	0	8
	SLT ^a	-	4	-
	SENO ^b	-	1	-
	SET ^c	-	1	-
	Class teacher	-	1	-
	Principal	-	1	-
	Qualifications:			
	Professional	-	5	0
	Professional+	-	3	1
	PhD	-	-	7
Experience of services use:	1-5 yrs	8	-	-
	5+ yrs	2	-	-
Experience of service provision:	1-5 yrs	-	1	-
	5+ yrs	-	7	-

Note. ^a = speech and language therapist; ^b = special educational needs co-ordinator; ^c =special education teacher.

Survey results

The results are presented as three sections: (i) the role of the child in decision-making about support in school, (ii) assumptions about DLD, and (iii) goals of collaboration. Descriptive statistics and illustrative quotes are tabled in relation to each topic.

The role of the child in decision-making about support in school

Participants were asked the extent to which they agreed with four statements about including the child in decisions about their support in school. Descriptive statistics are presented in Table 2, and illustrative quotes are presented in Table 3.

Table 2 *Statements relating to including the child in decision-making: percentage responses and inter-quartile range*

Survey statement	R	Strongly disagree	Disagree	Undecided	Agree	Strongly agree	IQR
		N	N	N	N	N	
(1) The child with a language disorder should have influence in decisions about their support	R1	0	4	2	8	10	1
	R2	-	-	-	-	-	-
(2) The child with a language disorder should be given the opportunity to express their views to those who have the power to make changes happen	R1	0	3	3	8	11	1
	R2	-	-	-	-	-	-
(3) It is best if adults decide whether the child with a language disorder is given a say in decisions about their support	R1	3	10	7	3	2	2*
	R2	3	16	3	3	0	1
(4) Knowledge that the child brings about their language disorder should guide the practice of the SLT and teacher	R1	1	2	7	5	11	1.75*
	R2	0	1	2	7	15	1

Note. R1= round 1, R2= round 2, *= consensus not reached. Only statements 3 and 4 were included in round 2 of the survey.

For statement one, 12 of the 26 participants *strongly agreed* and eight *agreed* that the child with DLD should have influence in decision-making about their support in school. Two participants were *undecided* and four *disagreed*. This statement therefore reached agreement at round 1 (IQR=1). The 12 who *strongly agreed* and the four who “agreed” referred to the right of a child to be heard in decisions that affect their lives and/or how understanding their priorities and preferences can help improve service delivery (Table 3, Quote 1). Four of those who *agreed*, stated that influence is more relevant for older children (Table 3, Quote 2). Those who *disagreed* or were unsure stated that influence was conditional upon a child’s age, as well as their capacity to understand (Table 3, Quote 3, 4, 5). One concern expressed by those *undecided* was that having to make decisions about support may place too much of a burden on the child.

Eleven participants *strongly agreed*, eight participants *agreed*, three were *undecided* and three participants *disagreed* with statement 2. Those who *strongly agreed* referred to the benefits for all children, including those with DLD, of having the opportunity to influence those in power. Six of those who *strongly agreed* stated that in practice a child having influence would only be possible if those who have the power to make decisions in school were willing to listen -which they viewed as unlikely. Those who *agreed* with the statement cautioned that having the opportunity to express views to those in power might benefit some children with DLD, but not all. Again, older children were considered more suitable - as were those with less severe language needs. Participants who were *undecided* and/or *disagreed* stated that it was best if the child expresses their views to a

familiar adult and that this person advocates on behalf of the child (Table 3, Quote 6). One participant was *undecided*, not for any reasons to do with the child, but because they believed staff to be limited in their capacity to change how things are done in schools. Agreement was reached for this statement at round 1 (IQR=1).

Two participants *strongly agreed*, three *agreed*, seven were *undecided*, ten participants “disagreed,” and three “strongly disagreed” with statement 3 so agreement was not reached in round 1 (IQR=2). Those who *strongly agreed* and *agreed* stated that children may not know what is best for them (Table 3, Quote 7). Those who were *undecided* cited examples of cases where they believed a child should not be included in decision-making. Such cases included where a child was young, where a child was emotionally vulnerable, or where a child was considered unable to be involved, due to a lack of verbal or cognitive competence (Table 3, Quote 8). The most commonly-cited reason given by those who *disagreed* with statement 3 in round 1 related to the rights of a child to express a view about decisions that will have an impact on their lives (Table 3, Quote 9).

After considering the views of other participants, eight people changed their view about this statement in round 2. Two changed from *strongly agree* to *disagree* and five participants changed their view from *undecided* to *disagree*. There was an acknowledgement from those who changed their view that, although they knew of exceptional cases where it may not be appropriate, they now agreed a child should, as a broad principle, decide on the support to be provided to them (Table 3, Quote 10). One reason given was the importance of the child’s view about relevant

support, given the different presentations of children with DLD (Table 3, Quote 11).

One participant changed their view from *undecided* to *agree*. Initially uncertain, after considering the views of others, they then agreed with the view that that *an adult is best placed to decide on behalf of the child*. Their reason was that a child may have difficulty expressing their views and making decisions (Table 3, Quote 12). Agreement was reached on statement 3 after two rounds (IQR=1).

For statement 4, eleven participants *strongly agreed*, five *agreed*, seven were *undecided*, two *disagreed*, and one *strongly disagreed*. Agreement was not reached for this statement in round 1 (IQR= 2). Those who *agreed* stated that the knowledge that a child can bring to decision-making about support in school that helps them to learn is valuable (Table 3, Quote 13). A commonly-cited reason by those who were *undecided* was that the child lacks the ‘right kind of knowledge’ about DLD to determine what SLTs and teachers should do. Two participants who *disagreed* stated that, while it is important for practitioners to be aware of the views of children, knowledge from research should guide practice (Table 3, Quote 14).

Eight participants changed their view about statement 4 after reading the views of other participants. Four changed from *undecided* to *agree*. One participant who changed to agree still expressed uncertainty, stating that the child’s view should be acted upon, ‘only if the SLT agreed.’ Three participants changed their view from *agree* to *strongly agree*, persuaded by the comments of others that the child with DLD is best placed to know what support they need. One participant changed their view from *strongly agree*

to *agree*, stating that such decisions may need to be collaborative, rather than being based only on what a child says. At the end of round 2, agreement was reached (IQR=1) as 20 participants agreed with statement 4 (IQR=1).

Table 3 *Participant quotes related to the role of the child in decisions about supports*

Quote ref	Participant type	Quote
Quote 1	Researcher (education)	“It is only through discussions that we will be able to fully understand the barriers and enablers which exist for the child, their priorities for goals of intervention and also the appropriate modes of delivery which will promote their self-efficacy and independence”
Quote 2	Practitioner (SLT)	“I agree, but involvement in decisions about their support in school is particularly relevant for older children/young people”
Quote 3	Parent	“I'm not sure because very young children, especially those with a language disorder, cannot verbalise where exactly their needs lie”
Quote 4	Researcher (SLT)	“I have put undecided just because I think it will depend on the capacity of the child”
Quote 5	Practitioner (SLT)	“Again depends on age / level of disorder; but generally empowering the child as they are all so different long term would have very beneficial impact”
Quote 6	Practitioner (teacher)	“I disagree. I think children with DLD should talk to the person they work with if they want to and then there should be systems in place for ensuring the information gets to the person in 'power”
Quote 7	Parent	“Children might not always know what is best, so adult input is vital”
Quote 8	Practitioner (SLT)	“There may be times in a young person's life when the family wish to preserve self-esteem or manage mental health needs and I have experienced situations where families have decided not to include the child in decisions and this has not been detrimental to the child”
Quote 9	Researcher (SLT)	“This goes against the human rights of the child. I believe children/young people should be encouraged and facilitated to be active decision-makers, and given the skills to fully participate”

Quote ref	Participant type	Quote
Quote 10	Practitioner (SLT)	“There are circumstances where I can agree that it is best if adults decide whether the child/young person with a language disorder is given a say in decisions about support... however, I now think on balance that it should be automatic that the young person has a say in decisions about support”
Quote 11	Parent	“The further thought I weighted on this, the more I strongly agreed, due to the variety of needs and impact DLD has on the child; they know themselves better than anyone”
Quote 12	Parent	“I wasn’t sure, but now I agree with what people said that adults should decide if the child cannot verbally or mentally make decisions – because parents know the child best”
Quote 13	Practitioner (SLT)	“I agree...I am thinking here of children's knowledge on what helps them to learn (e.g. showing, demonstrating, using pictures) should definitely guide the practice of (a) SLT and teacher working with the child”
Quote 14	Parent	“An awareness of what the child knows is good, so the teacher/SLT is aware of their knowledge, but practice should be guided by the evidence base- on what’s best going to improve their language”

Note. SLT= speech and language therapy.

Assumptions about DLD

Participants were asked the extent to which they agreed with four statements relating to this topic. Descriptive statistics are presented in table 4 and illustrative quotes are in table 5.

Table 4 *Statements related to assumptions about DLD: percentage responses and inter-quartile range*

Survey statement	R	Strongly Disagree N	Disagree N	Undecided N	Agree N	Strongly Agree N	IQR
(5)The extent to which a language learning difficulty is a problem depends on how learning is set up in school	R1	0	2	3	11	10	1
	R2	-	-	-	-	-	-
(6) Because of the nature of their needs, the child with a language disorder will always require individualised interventions outside of the classroom	R1	2	8	9	3	4	2*
	R2	1	13	4	4	4	2*
(7) The needs of the child with a language disorder cannot be met in school unless the barriers to their learning and participation are addressed	R1	1	0	0	2	22	1
	R2	-	-	-	-	-	-
(8) Meeting the needs of the child with DLD in the classroom requires the SLT and teacher to develop new ways of working	R1	0	1	8	12	5	1
	R2	-	-	-	-	-	-

Note. R1= round 1, R2= round 2, *= consensus not reached. Note: only statement 6 was included in round 2 of the survey.

For statement five, ten participants *strongly agreed*, 11 *agreed*, three were *undecided*, and two *disagreed*, so this statement reached agreement at round 1 (IQR=1). Of those who *strongly agreed*, one person stated that if the environment in school was optimal then DLD may not be a problem at all (Table 5, Quote 1). Those who *agreed* outlined the benefits of ensuring the focus of assessment and of intervention is on improving the environment, rather than on improving the child (Table 5, Quote 2). One parent who was *undecided* suggested that it is better to view language learning difficulties as a problem in the way the child's brain is set up which needs to be remediated, so that they can get the support they need (Table 5, Quote 3). Another parent who *disagreed* discussed the idea that if DLD is a medical condition that the child always has, regardless of the environment in which they function; this can help to persuade others that their needs are real (Table 5, Quote 4).

For Statement 6 in round 1: four participants *strongly agreed*, three *agreed*, nine were *undecided*, eight *disagreed*, and two *strongly disagreed*. Agreement was not reached for this statement after round 1 (IQR= 2). Those who *strongly agreed* and/or *agreed* in round 1 referred to the need for tailored supports for the individual child with DLD which, it was argued, is best delivered by an SLT (Table 5, Quote 4). One participant *strongly agreed*, two *agreed*, and three were *undecided* about this statement because of concerns about inadequate classroom practices and/or resource constraints, which they had experienced (Table 5, Quote 5). One researcher/lecturer in SLT stated that 1:1 support outside of the classroom is a necessary alternative (Table 5, Quote 6) when the optimal model (in-class

support) is not possible. Two further participants who were *undecided* drew a distinction between *individualised* support and support *delivered individually*. They agreed that support for a child with DLD in school will always need to be *individualised*, but expressed uncertainty about whether this support *needed to be delivered outside the classroom*. Of those who *disagreed* and/or *strongly disagreed*, five also made this distinction, but stated that *individualised* goals could be worked on in class (Table 5, Quote 7).

At the end of round 2, nine participants had changed their view about statement 6. Five of nine participants changed their view from *undecided* to *disagree*, stating that, in principle, inclusive class-based models are optimal (Table 5, Quote 8). One participant changed their view from *disagree* to *undecided*, clarifying that their first response was based on certain classroom conditions being met (Table 5, Quote 9). One participant changed their view from *agree* to *strongly agree*, stating that unless the child was in a “specialist” setting, they would always need 1:1 support outside the classroom because of the nature of their needs. At the end of round 2, agreement was *not reached* for this statement (IQR=2). Twenty two people *strongly agreed*, two participants *agreed* with statement 7, and one participant *strongly disagreed*. Agreement was reached across participants at round 1 (IQR=1). The central role of language for thinking and learning in school was cited by those who *agreed* or *agreed strongly* with this statement (Table 5, Quote 10). The participant who *disagreed* expressed concern that there could be negative funding implications for providing direct speech and language therapy intervention as a result of this statement

(Table 5, Quote 11).

For statement 8 in round 1, five participants *strongly agreed*, 12 *agreed*, eight were *undecided*, and one participant *disagreed*, so agreement was reached (IQR=1). Those who *strongly agreed* or *agreed* stated that in order to be led by the priorities and preferences of the child, new methods would be needed. One participant who *agreed* referred to this as “co-construction” and described how it differs from present practice (Table 5, Quote 12). Two participants who *agreed* added that this way of working could assist the professional development of those involved. Those who were *undecided* thought that some, but not all, collaborative methods would be new, but that learning ways of listening to the child would be new (Table 5, Quote 13). The participant who *disagreed* stated that in their experience collaborative working required a refining of known methods, rather than developing completely new ones.

Table 5 *Participant quotes related to assumptions about DLD*

Quote ref	Participant type	Quote
Quote 1	Researcher (SLT)	“Of course it is only a problem because we say it is- like everything else, we decide. I also think if we can make language MORE valued in school, then the problem can be dissolved completely”
Quote 2	Practitioner (SLT)	“I think it is best to say DLD is a problem because of an interaction between the learning demands in school and the language learning abilities of the child ...then it makes people focus on assessing the environment and putting in place the right supports, differentiation and language learning opportunities in school’
Quote 2	Parent	“I’m not sure about this. I think it is better to think of it like a problem in the child’s brain that needs to be sorted so that they can learn- then they will get the help they need”
Quote 3	Parent	“No I don’t agree, it is like people saying someone who can’t do something has a problem and others saying ‘no, its only society that makes it a problem’ and I disagree. DLD is awful for my child all of the time, wherever they go, and people believe me when I say that it is a real, medical condition’
Quote 4	Practitioner (SLT)	“SLTs are essential to the process of fine adjustment that puts a task within the child’s zone of proximal development and knows how the child learns. Intervention delivered by SLTs is what young people with DLD need”
Quote 5	Parent	“Unfortunately it’s not happening the way it should in class so 1:1 is necessary. That said, expectations of what teachers can achieve in school must remain realistic. Perhaps a progressive approach with set goals over the next 10 years should be considered, then it may be possible”
Quote 6	Researcher (SLT)	“It may be possible to work with teenagers in the classroom if this was sufficiently well-resourced and it was possible to differentiate to the appropriate degree and if oral language aspects of the curriculum were sufficiently foregrounded for all children in schools. However this is the ideal and if high level of resource, skills, collaboration and focus on oral language development in the curriculum are NOT present then withdrawal becomes necessary. We need to argue for the better alternative!”

Quote ref	Participant type	Quotes
Quote 7	Practitioner (SLT)	"I think that individualised goals can be met in the classroom environment with some new creative classroom practices"
Quote 8	Researcher (Education)	"In the first round I was undecided but now I disagree. Given the current policies on inclusive education and my own experiences of interviewing children with additional needs, keeping children in the mainstream classroom with differentiated curriculum and adaptations is optimal in terms of academic and psychosocial outcomes"
Quote 9	Researcher (SLT)	"Having now read the comments, I see, that what I originally meant is closer to 'undecided' than 'disagree' because of 'certain conditions' - mainly the type of class (f.ex. especially for DLD children) and resources: is there a specialized, experienced teacher? Does he/she have enough of support from his/her principal? Is there an assistant in the class? How many pupils there are in a class?"
Quote 10	Practitioner (SLT)	"language is like the air we breathe, in school everything that is done involves language, everything that is said, and not said involves language, everything that is tested is tested through language; there are so many barriers and they are invisible, and SLTs have to start addressing them"
Quote 11	Parent	"I'm worried about this statement if it's saying this was the only type of intervention needed. When people hear about stuff like this then they can use it as an excuse to withdraw pure SLT support because they think 'oh, the school can do that'"
Quote 12	Researcher (Education)	"In most settings, SLTs work with children and where possible report to the school / teacher regarding that child. This needs to evolve into SLTs working with teachers and teachers working with SLTs with the child as their focus, in order to co-construct specific practices suited to that child at that stage in education"
Quote 14	Practitioner (SLT)	"I think we could have some of the methods needed to help the child with what their goals are in the classroom but what is new is what we can use to help the child with DLD to give their opinion"

Note. SLT= speech and language therapist.

Goals of collaboration

Participants were asked the extent to which they agreed with four statements relating to the goals of collaboration. Descriptive statistics are presented in table 6, and illustrative quotes in table 7.

Table 6 *Statements related to the goals of collaboration, percentage responses and inter-quartile range*

Survey statement	R	Strongly disagree N	Disagree N	Undecided N	Agree N	Strongly agree N	IQR
(9) The main goal of collaboration should be to ensure the child with DLD has equal opportunities to learn in school	R1	0	3	1	4	18	1
	R2	-	-	-	-	-	-
(10) The desired outcome of collaboration is to enable the child with DLD to participate and achieve in school	R1	0	3	2	3	18	1
	R2	-	-	-	-	-	-
(11) If a particular language intervention is known to be effective, but risks stigmatising the child with a language disorder, it should not be delivered	R1	0	0	2	2	22	1
	R2	-	-	-	-	-	-
(12) It is part of the collaborative work of the SLT and teacher to promote positive views of difference across the school	R1	0	2	2	7	15	1
	R2	-	-	-	-	-	-

Note. R1= round 1, R2= round 2, SLT= speech and language therapist; No statements were included in round 2 of the survey.

For statement nine, 18 participants strongly agreed, and four agreed that the main goal of collaboration is to ensure the child/young person with a language disorder has equal opportunities to learn and be included in class/school. One participant was undecided, and three participants disagreed with the statement, so agreement was reached for statement 9 at round 1 (IQR=1). Of those who agreed or strongly agreed, seven participants discussed the importance of including equal opportunities as a principle as this is not always enacted in practice (Table 7, Quote 1). Two further participants who agreed with the statement discussed a lack of relevant evidence, which they stated acts as a barrier to achieving participation by the child (Table 7, Quote 2). The participant who was undecided stated a preference for the term “equitable” rather than “equality” as a guiding principle, when planning support in school for the child with DLD.

Two of three participants who disagreed stated that the main goal of collaboration between the SLT and the teacher should be to improve the language skills of the child (Table 7, Quote 3). A third participant who disagreed stated that the focus should be on ensuring each child is supported to reach their potential (Table 7, Quote 4).

For statement 10, 18 strongly agreed, three participants agreed, two were undecided, and three disagreed. No-one strongly disagreed so agreement was reached (IQR=1). The most commonly stated reason given by those who agreed with the statement was the need to deliver outcomes that have a positive impact on a child’s life chances. Those who were undecided were concerned that such a principle is too focused on academic achievement, to the exclusion of the longer term needs (Table 7, Quote 5).

Two participants who disagreed stated that speech and language therapy support should focus on improving language-specific outcomes, and the school should be responsible for other outcomes (Table 7, Quote 6).

For statement 11, 18 participants strongly agreed, three agreed and five were undecided. No participant disagreed with this statement so agreement was reached for statement 9 at round 1 (IQR=1). Those who strongly agreed expressed the view that setting the child apart from their peers can have many negative results for that individual and should be avoided (Table 7, Quote 7). Three participants who agreed added that they would integrate the effective aspects of an intervention into the classroom setting (Table 7, Quote 8). Those who were undecided, mostly parents, discussed that if there was an intervention which was known to be effective for the child with DLD, they might try to persuade the child to engage with the intervention - even if it was different from what other children were doing (Table 7, Quote 9).

For statement 12, 15 participants strongly agreed, seven agreed, two were undecided, and two disagreed. One reason given by a participant who agreed was that SLTs have specific knowledge about DLD (Table 7, Quote 10). One participant who was undecided expressed the view that this may not be necessary depending on the school setting, but that it should be a goal of collaboration to determine whether this work is needed or not (Table 7, Quote 11). Those who disagreed stated that it was the responsibility of the school (and not the SLT) to ensure that students understand the ways in which people differ (Table 7, Quote 12). Agreement was reached for statement 12 at round 1 (IQR=1).

Table 7 *Participant quotes related to the goals of collaboration*

Quote ref	Participant type	Quote
1	Practitioner (teacher)	“As a basic principle I am glad this is here. We all say it but actually it doesn’t happen in practice. A lot of what we currently do is not guided by this. It takes the kids to remind us”
2	Researcher (SLT)	“Intervention should always have real world outcomes which impact on the ability of the child to fully participate...The problem here is that the research doesn’t help us with these sorts of outcomes, so practitioners are confused as to how to achieve these”
3	Parent	“The good practice in the school should mean that the child/ young person has equal opportunities anyway. The overarching goal of collaboration should be to improve language skills for the child”
4	Parent	“I disagree as I feel the focus should be on individual potential not equality. If the focus is equality very bright kids with DLD won’t reach their potential”
5	Practitioner (teacher)	“Yes but what about life skills? I feel the child needs to learn life skills that doesn't come naturally to them because of the DLD, exams only get you so far, you need life skills for all of your life”
6	Parent	“Supports should help the child in the areas that they struggle in, and children with DLD struggle with language. I want the SLT to help my child to make progress in their language skills and school can worry about the rest”
7	Researcher (SLT)	“Absolutely...stigmatising leads to disengagement, reduction in self-efficacy and hence poorer long term outcomes and so is crucial to avoid”
8	Practitioner (SLT)	“If you work in a school in an integrated way then you know that always have to translate your knowledge to that context. In this case I would try to apply the element of the intervention thought to be the bit that caused the positive change to the classroom somehow ”
9	Parent	“Previously my son has not wanted to be set apart from his peers, he is very head strong but if I think he should do something, I might talk him round, even if is going out of class to do things that are different from the rest and he is embarrassed”

Quote ref	Participant type	Quote
10	Practitioner (SLT)	“Although it is mainly the schools responsibility, I agree it is for the SLT to be involved with this goal because there are many misconceptions amongst school staff (even the experienced ones) about language disorders and the SLT can put them right”
11	Practitioner (SET)	“This depends upon the school...In some schools this might not be necessary as it is in place whereas for others it might be required. A commitment to inclusion may be a necessary baseline for collaborative practice and so if not present would be a priority”
12	Parent	“It's important in life for people to understand that everyone is different, different personalities, skin colours, religions, different abilities. Everyone deserves to be treated the same, but it is for the schools to educate and remind pupils this, not the SLT”

Note. SLT= speech and language therapist, SET= special education teacher.

Discussion

We report the findings of an online Delphi survey, the final phase of our larger study to develop a model to inform collaborative practice when supporting children with DLD in school. The purpose of the survey was to identify areas of agreement and disagreement across parents, practitioners, and researchers about three topics that had been previously identified as contentious for stakeholders, and to generate key premises to underpin a model of effective IPC with children who have DLD.

At the end of round 1 of the survey, there was strong support across all stakeholder groups for the collaborative goals as proposed. Agreement occurred for the three statements related to assumptions about DLD and for two of four statements about the role of the child in decision- making.

By the end of the second round, agreement was reached for all but one statement. That statement related to whether or not the child with DLD requires additional intervention outside of the classroom. The reason for lack of agreement about this statement did not relate to the nature of the child's needs, nor to differences about intervention - which all agreed should be individualised and class-based - but rather it related to participants' experience of inadequacies in the current systems of support in schools.

Topic 1: The role of the child with DLD in decisions about support

We identified ambivalence across the participant groups about this topic, although there was final agreement that the child should have influence in decisions about support. Many participants stated that giving a child influence should be conditional on certain within-child factors, such as the age of the child and/or their language competence. Some participants also discussed the expert knowledge of the professionals being more appropriate to inform practice, rather than the views of the child.

Such ambivalence can be accounted for by a commonly-held belief by professionals that a child is not yet a sentient being (Cavet and Sloper 2004), resulting in scepticism about the validity of a child's contribution and/or reluctance to relinquish power/control over the child (Lundy 2012). Such a belief may explain why children currently are rarely included in decisions made about support (Kilkelly *et al.* 2004; Rose and Shevlin 2004; Flynn *et al.* 2011) and why even when they are included, they appear to have little influence in shaping the outcome of the process (Kilkelly *et al.* 2004; Rose *et al.* 2015). An important premise to underpin a model of IPC

is that the child with DLD is a being in their own right. Concepts to guide practice might then incorporate children's agency (Ballet *et al.* 2011), participation (Hart 2013) and everyday listening (Clark 2005).

Topic 2: Assumptions about DLD

In reviewing the literature, we found differences in perspective about DLD. Much of the literature from speech and language therapy was about understanding the diagnostic boundaries of DLD and establishing the efficacy of interventions to reduce the language impairment; a neutralist perspective (Tomblin 2006). In education, the literature was about ways in which the classroom environment is adapted for children with developmental disabilities, more aligned with a normativist perspective (Tomblin 2006). Such differing perspectives may act as a barrier to IPC, specifically in establishing shared goals of intervention.

Most participants in this study agreed that the extent to which a child's language learning difficulties are considered a "problem" is essentially subjective, and dependent on the context in which the child functions. They discussed the need to understand/explain these language learning differences to ensure the needs of the child are met in school. We propose that a second premise to underpin a model of IPC is that DLD should be conceptualised as a difference, rather than a disorder.

Guided by this premise, assessment would be focused on understanding how the child learns language with the purpose of informing how classroom practices can be optimised for their learning and participation. This is different from much current practice in schools, where the focus is on assessing and remediating the child's language deficits,

separate to classroom learning (Dockrell *et al.* 2017).

In the literature we found a shared understanding across speech and language therapy and education about dynamic assessment approaches which, although in need of further development, could be used by the SLT and teacher to inform such adaptations (Camilleri and Law 2007; Hasson and Botting 2010; Camilleri and Botting 2013). Interestingly, a small number of participants supported the idea of DLD as a medical condition. Reasons given were to do with securing funding or persuading others of the seriousness of DLD. These views are consistent with findings of a recent Delphi conducted by (Bishop 2017) to establish consensus about terminology relating to this population. Stakeholders see a diagnosis as having currency when navigating services, but it may be of limited value in understanding the needs of the child.

Topic 3: Goals of collaboration

In our earlier studies we found differences in the views of stakeholder groups about goals of collaboration. For professionals, addressing the deficits of the child in school was the priority whereas for the children, addressing the barriers to their participation and achievement was paramount. In this study, when presented with the children's views of how they can be enabled to better participate and achieve in school, there was strong agreement across the stakeholder groups in support of those views. We propose a third premise to underpin a model of IPC is that **collaboration ensures the inclusion of the child with DLD in school.**

Based on this premise, the collaborative practice of SLTs and teachers would involve an analysis of the beliefs, norms and practices in

school that act to disadvantage the child's learning and participation and how to reduce these.

Implications for policy, service planning and future research

A key implication of the findings of this study for policy is the need to make overt both the *unconditional* right of the child to be included in decisions about support and the need to give the child *genuine influence* in shaping the outcome of any such decisions.

Changing practice in the classroom requires protected time and ongoing coaching/ professional support for staff and effective education for parents (Lofthouse *et al.* 2016; Markussen-Brown *et al.* 2017). When planning services to schools for children with DLD, providing sufficient resources for SLTs and teachers to develop and work collaboratively to make these necessary changes is essential.

Future research needs to focus on increasing knowledge of, and skills in, effective classroom practice for children with DLD. Research is also needed to develop ways to maximize these children's participation in effective and evidence-based decision-making.

Strengths and limitations

Through engagement with a diverse range of stakeholders' views, we have established three premises to inform the development of a model to inform collaborative practice. The views of children with DLD have been central throughout the process study making this study unique. A purposeful and transparent recruitment strategy, the careful tracing of diverse perspectives during analysis and reporting, actively seeking feedback from multiple sources and the independent analysis of qualitative data, all added

rigor to the study. We acknowledge that the topics presented to the participants (particularly *child voice* and *inclusion*) may be prone to social desirability bias (Bolger and Wright 2011). However, the diversity in views identified during analysis gives some reassurance that participants were able to express open views and/or disagree with the statements presented. Finally, as with any purposive sample, these findings cannot be said to represent the views of all practitioners, researchers or parents, but these findings have advanced our understanding of IPC and how it might be better facilitated in schools where there are children who have DLD.

Conclusions

In this paper, we report the final phase of a study to establish key premises to inform collaborative practice in school when supporting children with DLD. The statements for the survey were informed by our earlier work in which differences in the perspectives of stakeholders were identified. The topics explored included the role of the child in decisions about support; assumptions about DLD; and the goals of collaboration.

The premises we propose represent changes in the nature and focus of the collaborative work of SLTs and teachers. We support giving the child with DLD influence in decision-making and we argue the need to focus collaborative efforts on changes to practice in the classroom so that the child with DLD is better enabled to participate and achieve.

The next stage of this research will be to refine the proposed model, then test it in a series of case studies in schools. Although at an exploratory stage, an agreed set of premises to inform the collaborative practice of SLTs and teachers has the potential to improve the life chances of the many

children with DLD in school.

Acknowledgements

This research was funded by the Health Research Board of Ireland under grant SPHeRE/2013/1. We would like to thank the participants who took part in the study and those who gave feedback on the survey during development. We would like to thank the academic reviewers who gave us feedback on the study protocol. Finally, we thank Hannah Grove for analysing the qualitative data between rounds.

Declaration of Interest

The authors declare no conflicts of interest.

Data availability statement

Not applicable. Ethical approvals for the study required that data are accessible only to the researchers

References

- Ballet, J., Biggeri, M. and Comim, F. (2011) 'Children's agency and the capability approach: A conceptual framework' in Biggeri, M., Ballet, J. and Comim, F., eds., *Children and the capability approach*, London: Palgrave Macmillan UK, 22-45.
- Bishop, D. (2017) 'Why is it so hard to reach agreement on terminology? The case of developmental language disorder (DLD)', *International Journal of Language and Communication Disorders*, 52(6), 671-680.
- Bolger, F. and Wright, G. (2011) 'Improving the Delphi process: Lessons from social psychological research', *Technological Forecasting and Social Change*, 78(9), 1500-1513.
- Brandel, J. and Loeb, D. (2011) 'Program intensity and service delivery models in the schools: SLP survey results', *Language, Speech and Hearing Services in Schools*, 42(4), 461-90.
- Camilleri, B. and Botting, N. (2013) 'Beyond static assessment of children's receptive vocabulary: The dynamic assessment of word learning (DAWL)', *International Journal of Language and Communication Disorders*, 48(5), 565-581.
- Camilleri, B. and Law, J. (2007) 'Assessing children referred to speech and language therapy: Static and dynamic assessment of receptive vocabulary', *Advances in Speech-Language Pathology*, 9(4), 312-322.
- Cavet, J. and Sloper, P. (2004) 'The participation of children and young people in decisions about uk service development', *Child: Care, Health and Development*, 30(6), 613-621.
- Clark, A. (2005) 'Listening to and involving young children: A review of research and practice', *Early Child Development and Care*, 175(6), 489-505.

- Conti-Ramsden, G. and Durkin, K. (2012b) 'Postschool educational and employment experiences of young people with specific language impairment', *Language, Speech and Hearing Services in Schools*, 43(4), 507-20.
- D'Amour, D., Ferrada-Videla, M., Rodriguez, L.S.M. and Beaulieu, M.-D. (2005a) 'The conceptual basis for interprofessional collaboration: Core concepts and theoretical frameworks', *Journal of Interprofessional Care*, 19(1), 116-131.
- D'Amour, D., Goulet, L., Labadie, J.-F., Martín-Rodriguez, L.S. and Pineault, R. (2008) 'A model and typology of collaboration between professionals in healthcare organizations', *BMC Health Services Research* [online], available: <http://dx.doi.org/10.1186/1472-6963-8-188>.
- Dockrell, J., Howell, P., Leung, D. and Fugard, A.J.B. (2017) 'Meeting the needs of children with speech language and communication needs in england: Challenges for practice', *Frontiers in Education* [online], available: <http://dx.doi.org/10.3389/educ.2017.00035>.
- Dockrell, J. and Lindsay, G. (1998) 'The ways in which speech and language difficulties impact on children's access to the curriculum', *Child Language Teaching and Therapy*, 14(2), 117-133.
- Florian, L. and Black-Hawkins, K. (2011) 'Exploring inclusive pedagogy', *British Educational Research Journal*, 37(5), 813-828.
- Flynn, P., Shevlin, M. and Lodge, A. (2011) 'Are you listening? I'm me!', *Reach*, 25(1), 60-74.
- Gallagher, A., Murphy, CA., Conway, P.F. and Perry, A. (2019b) 'Engaging multiple stakeholders to improve speech and language therapy services in schools: An appreciative inquiry-based study', *BMC Health Services Research* [online], available: <http://dx.doi.org/10.1186/s12913-019-4051-z>.

- Glover, A., McCormack, J. and Smith-Tamaray, M. (2015) 'Collaboration between teachers and speech and language therapists: Services for primary school children with speech, language and communication needs', *Child Language Teaching and Therapy*, 31(3), 363-382.
- Grunwell, P. (1983) 'Phonological therapy: Premises, principles and procedures', in Edwards, M., Miller, C.J. and de Montfort-Supple, M., eds., *XIXth Congress of the International Association of Logopedics and Phoniatrics*, University of Edinburgh, Scotland, 14-18 Aug, Switzerland: Karger, available: <http://dx.doi.org/10.1159/000316868>.
- Hart, R.A. (2013) *Children's participation: The theory and practice of involving young citizens in community development and environmental care*, London: Routledge.
- Hasson, N. and Botting, N. (2010) 'Dynamic assessment of children with language impairments: A pilot study', *Child Language Teaching and Therapy*, 26(3), 249-272.
- Hsu, C.C. and Sandford, B.A. (2007) 'The Delphi technique: Making sense of consensus', *Practical Assessment, Research and Evaluation*, 12(10), 1-8.
- Kilkelly, U., Kilpatrick, R., Lundy, L., Moore, L., Scraton, P., Davey, C., Dwyer, C. and McAlister, S. (2004) *Children's rights in Northern Ireland*, available: [https://pure.qub.ac.uk/portal/en/publications/childrens-rights-in-northern-ireland-2004\(ffd5d134-9e45-40cc-9ecc-56f51f1b573c\)/export.html](https://pure.qub.ac.uk/portal/en/publications/childrens-rights-in-northern-ireland-2004(ffd5d134-9e45-40cc-9ecc-56f51f1b573c)/export.html).
- Law, J., Boyle, J., Harris, F., Harkness, A. and Nye, C. (2000a) 'Prevalence and natural history of primary speech and language delay: Findings from a systematic review of the literature', *International Journal of Language and Communication Disorders*, 35(2), 165-188.
- Law, J., Rush, R., Schoon, I. and Parsons, S. (2009b) 'Modeling developmental language difficulties from school entry into

adulthood: Literacy, mental health, and employment outcomes', *Journal of Speech, Language, and Hearing Research*, 52(6), 1401-1416.

Lofthouse, R., Flanagan, J. and Wigley, B. (2016) 'A new model of collaborative action research; theorising from inter-professional practice development', *Educational Action Research*, 24(4), 519-534.

Lundy, L. (2007) 'Voice' is not enough: Conceptualising article 12 of the united nations convention on the rights of the child', *British Educational Research Journal*, 33(6), 927-942.

Lundy, L. (2012) 'Children's rights and educational policy in europe: The implementation of the united nations convention on the rights of the child', *Oxford Review of Education*, 38(4), 393-411.

Markussen-Brown, J., Juhl, C.B., Piasta, S.B., Bleses, D., Højen, A. and Justice, L.M. (2017) 'The effects of language- and literacy-focused professional development on early educators and children: A best-evidence meta-analysis', *Early Childhood Research Quarterly*, 38, 97-115.

McCartney, E. (1999) 'Barriers to collaboration: An analysis of systemic barriers to collaboration between teachers and speech and language therapists', *International Journal of Language and Communication Disorders*, 34(4), 431-440.

McCartney, E. (2009) 'Joining up working: Terms, types and tensions' in Forbes, J. and Watson, C., eds., *Service integration in schools: Research and policy discourses, practices and future prospects*, Rotterdam: Sense Publishers, 23-36.

McKean, C., Law, J., Laing, K., Cockerill, M., Allon - Smith, J., McCartney, E. and Forbes, J. (2017) 'A qualitative case study in the social capital of co-professional collaborative co-practice for children with speech, language and communication needs',

International Journal of Language and Communication Disorders, 52(4), 514-527.

Okoli, C. and Pawlowski, S.D. (2004) 'The Delphi method as a research tool: An example, design considerations and applications', *Information and Management*, 42(1), 15-29.

Powell, C. (2003) 'The Delphi technique: Myths and realities', *Journal of Advanced Nursing*, 41(4), 376-382.

Rix, J., Sheehy, K., Fletcher- Campbell, F., Crisp, M. and Harper, A. (2013) *Continuum of education provision for children with special educational needs;a review of international policies and practices*, available: <http://oro.open.ac.uk/35012/16/Continuum%20review%20-%20Part%201%20-%20NCSE%202013.pdf> [accessed 10 Nov 2018]

Rose, R. and Shevlin, M. (2004) 'Encouraging voices: Listening to young people who have been marginalised', *Support for learning*, 19(4), 155-161.

Rose, R., Shevlin, M., Winter, E. and O'Raw, P. (2015b) *Project IRIS— inclusive research in Irish schools, A longitudinal study of the experiences of and outcomes for pupils with Special Educational Needs (SEN) in Irish schools*, available: <https://pdst.ie/sites/default/files/NCSE-IRIS-Report-No20.pdf> [accessed 4 May 2019].

Rowe, G. and Wright, G. (2011) 'The Delphi technique: Past, present, and future prospects — introduction to the special issue', *Technological Forecasting and Social Change*, 78(9), 1487-1490, available: <http://dx.doi.org/10.1016/j.techfore.2011.09.002>.

Royal College of Speech and Language Therapists (2016) *Speech and language therapists in schools*, available: https://www.rcslt.org/members/slt_in_schools/role_of_the_slt [accessed 20.07.17].

- San Martín-Rodríguez, L., Beaulieu, M.-D., D'Amour, D. and Ferrada-Videla, M. (2005) 'The determinants of successful collaboration: A review of theoretical and empirical studies', *Journal of Interprofessional Care*, 19(1), 132-147.
- Tomblin, J. (2006) 'A normativist account of language-based learning disability', *Learning Disabilities Research and Practice*, 21(1), 8-18.
- Tomblin, J.B., Smith, E. and Zhang, X. (1997) 'Epidemiology of specific language impairment: Prenatal and perinatal risk factors', *Journal of Communication Disorders*, 30(4), 325-344.
- von der Gracht, H.A. (2012) 'Consensus measurement in Delphi studies: Review and implications for future quality assurance', *Technological Forecasting and Social Change*, 79(8), 1525-1536.

Appendix: Participant sampling grid

Participant type	N	Criterion 1 (essential)	Criterion 2 (essential)	Criterion 3 (essential)	Criterion 4 (desirable)
Researcher (education)	4	Works in university setting	Actively engaged in research/ teaching	Has published in peer-reviewed journals about SEN*/ inclusion	Has contributed to policy/professional guidelines about SEN/inclusion /collaboration
Researcher/ (speech and language therapy)	4	Works in university setting	Actively engaged in research/ teaching	Published in peer-reviewed journals about DLD^/ SEN/ inclusion	Has contributed to policy/professional guidelines about DLD/inclusion /collaboration
SLTs	4	Works in mainstream schools with children with DLD	Engages in collaborative planning and practice as part of current role	Active member of DLD national network	Has contributed to training/development about working in schools for their professional body
Teachers	4	Works in mainstream school with children who have SEN	Engages in collaborative planning and practice as part of current role	Active member of professional network re SEN	Has contributed to training/development about SEN/inclusion for their professional body
Service- users	8	Mothers/father of a child with DLD	Experience of collaborative meetings about support for their child in school	Experience of different models of speech and language therapy support for their child	Is member of DLD parent group

Note. *special educational needs, ^ Developmental Language Disorder.

Discussion

Working in schools to meet the needs of children with developmental language disorders (DLD) poses significant challenges for a speech and language therapist (SLT) because it depends on the capability of the SLTs and teachers to collaborate effectively. A lack of shared understanding between these practitioners has been identified, which often acts as a barrier to collaborative working (McCartney 2000; Law *et al* 2002; McCartney *et al.* 2011). In a different clinical context, Grunwell (1983) proposed that premises should be established when there is a lack of clarity about best practice. These are necessary, according to Grunwell (1983), in order to overtly state a coherent set of underlying principles and then design procedures (interventions) for practice. Premises are the core constructs from which principles are developed and, based on these, practices are derived.

The aims of this research were to first, characterise the diverse range of perspectives involved in the planning and delivery of collaborative supports in school for children with DLD, and second, to establish a shared understanding across stakeholder groups to inform the development of an agreed set of *premises* that will improve inter-professional collaboration (IPC) between SLTs and teachers. As teachers and SLTs hold equal responsibility for meeting the needs of the child with DLD in school, stakeholders were included from across both fields when developing the agreed premises. Engaging service users has long been recognised as essential in health service improvement, so parents of children with DLD were also included in these studies. In recognising the rights of the child to

have a say on issues which affect them, a purposive sample of children with DLD from across Ireland was engaged to develop the premises, as these children were acknowledged to be experts in their own lives.

An unique feature of the research was an inclusive approach to stakeholder engagement when developing the premises. Given the exploratory nature of the research, an iterative series of studies was planned with the results from each phase informing the next study.

This research was designed in response to changes in Irish education and health policy which are intended to optimise the delivery of integrated services to children with DLD in schools. The findings from the series of studies in this research are both timely and of direct relevance to current SLT/ teacher collaborative practice in Irish schools.

Overview of research studies

The first study was a secondary analysis of a population-based sample of 13 year olds from the Growing up in Ireland (GUI) study (Economic and Social Research Institute 2014) (**paper I**). In the absence of published studies about the lives of children with speech and language needs (SLCN) in Ireland, a cross-sectional analysis was undertaken. The reasons for undertaking this study were first, to document the reported prevalence and type of disability found in a population-based sample of 13 year olds in Ireland; second, to characterise the socio-demographics and school context of these children with disabilities; third, to describe the nature of supports being received by this group in their first year of second-level education and last, to explore the association between self-concept and the presence of a disability.

Although not designed specifically to capture language difficulties, the GUI data set is sufficiently extensive to enable robust inferences to be made about the lives of children with developmental disabilities in Ireland. This study included an analysis of children with SLCN as well as those with other disability types in order to contextualise the research findings. The results demonstrated that, based on parental reports, children with SLCN are significantly under-identified relative to children with other developmental disabilities, such as those with specific learning difficulties and autistic spectrum disorder. Children with SLCN received the least amount of SLT support in school when compared with the other disability groups. Thirty percent of children with SLCN reportedly received no support in school. Of those who were reportedly receiving support, a sizeable proportion of parents reported low levels of satisfaction about support provided. Children with SLCN were at increased risk of low self-concept in popularity, as measured by the Piers Harris Scale of Self-Concept, adjusting for individual and school level factors. The study highlighted the need to consider ways of improving the delivery of SLT supports in school for Irish children with SLCN.

Several researchers have suggested that a lack of shared understanding between SLTs and teachers about DLD acts as a barrier to IPC (McCartney 1999; McCartney 2002; Tollerfield 2003; Hartas 2004). However, to date, such perspectives have not been subjected to a detailed examination. The next two research studies were designed to document the perspectives that underpin delivery of collaborative supports to children with DLD in school, and to examine the extent to which a shared

understanding (between SLTs and teachers) exists that could underpin the development of agreed premises. For this, two sources of data were examined. First, empirical, theoretical and policy literature about DLD across the fields of speech and language therapy and education (**paper II**) and second, stakeholders' views about services and supports from data that were collected at focus groups and at interview sessions (**papers III, IV and V**).

The perspectives identified are outlined in Figure 1 as they relate to the four domains of the structuration model of IPC developed by D'Amour *et al.* (2008). These include *shared goals/vision*, *internalization*, *formalization* and *governance*. Where perspectives were aligned in the study they are represented by a tick, with differences denoted by a cross. Most differences that were identified related to socio-relational domains (represented by broken lines, on the right of the diagram).

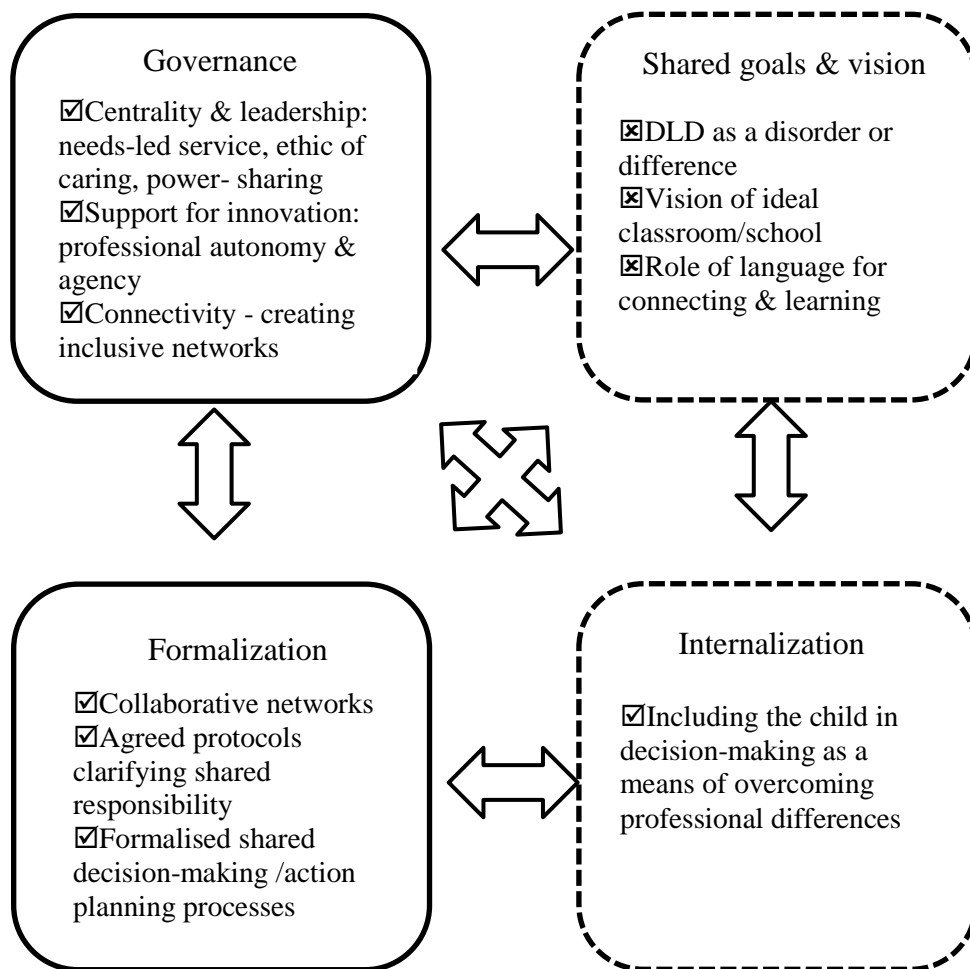


Figure 1. Synthesis of findings related to the domains of D'Amour's structuration model of inter-professional collaboration (D'Amour *et al.* 2008).

Identified differences in perspectives were consistent with previous studies (Giangreco 2000; Martin 2008), and these have implications for the development of *shared goals and vision*. From the integrative review of the literature clear differences across speech and language therapy and education were evident in relation to terminology, methods of assessment, priority outcomes and the nature of intervention. In the speech and language therapy literature the focus was on establishing the diagnostic boundaries of DLD, identifying reliable markers for the condition, and developing and

testing condition-specific treatments. Outcomes of interest were clinical, consistent with a view of DLD as being a condition or a disease (Tomblin 2006). In contrast, the emphasis in the education literature was to examine the adaptations to instruction that are necessary in the classroom to ensure the child with a disability can learn and participate. Outcomes were focused on children's capability. There was a rejection of a diagnostic-remediation approach (evident in the speech and language therapy literature) as a means of understanding and meeting the needs of children with DLD in the classroom. The unintended negative consequences of diagnostic labelling were discussed. In this literature, unexplained learning needs were not viewed as a disorder or a disease.

These fundamental differences suggest that assumptions about DLD across the professional groups are not aligned, which has implications for agreeing priority goals that are essential for successful IPC to occur. In speech and language therapy the focus is about remediating the deficits within the child, whereas in education the goal is related to how the environment in a school might be adapted to meet the needs of the child.

Differences between practitioners and children with DLD were identified, both when describing the goals of support in school and in describing an ideal school/classroom. Practitioners were focused primarily on the ways in which the language deficits of the child could be remediated in school, and/or how a child could be taught strategies to manage their difficulties in school. The primary concern of the children, on the other hand, was their inclusion in school.

These findings are consistent with the views of children with a range of speech and language needs from earlier studies (Owen *et al.* 2004; Merrick and Roulstone 2011; Roulstone and McLeod 2011). Unlike practitioners, these children provided a clear vision of their ideal inclusive classroom and school and explained practical ways in which this could be achieved. For example, they described their ideal setting as one where difference is celebrated, and where peers and teachers expect them to know an answer. Diversity as a positive resource, and presuming competence, have been considered fundamental principles of inclusive education (Florian and Black-Hawkins 2011; Danforth and Naraian 2015). These children also described the use of language for learning in the classroom, how the rules of talking could be adapted to allow more language-based learning, and the different registers of language. In contrast, neither the SLTs nor the teachers discussed optimising classroom discourse as a means of improving the language skills of the child with DLD, nor did they acknowledge the role of language as a means of enhancing social status.

Based on these findings, it is proposed that including children in decision-making about support may be a means of overcoming professional differences (*internalization*) between SLTs and teachers. Including the children may also ensure their greater participation and achievement in school.

A shared understanding existed between parents and practitioners in relation to *governance* and *formalization*. For both groups, delivering needs-based, tailored supports was considered the central goal of an ‘ideal’ speech and language therapy service. These findings are consistent with previous

studies where parent preferences have been documented (Roulstone *et al.* 2012; Hambly 2014). There was agreement about the nature of leadership (collaborative) and devolving power-sharing so that practitioners have the autonomy to make decisions based on their professional expertise. Such a service requires effective cross-sectoral networks. Rather than formalizing roles/procedures, both groups emphasised the importance of strengthening such networks to enable flexible action. Many of these characteristics are consistent with the findings about IPC from the UK reports, specifically in recommendations for professional autonomy (Lindsay and Dockrell 2004) and shared, flexible action (McKean *et al.* 2017).

A second aim of the research was to identify/ establish a shared understanding about premises to underpin collaborative practice. Given the nature of the differences in perspectives identified in the earlier phases of the research (Gallagher *et al.* 2019a; Gallagher *et al.* 2019b), further engagement with stakeholders was required to build agreement about key topics of contention (**paper VI**). Stakeholders recruited to this third study included practitioners - SLTs and teachers who work with children who have DLD, researchers from SLT and education, and parents of children with DLD. A Delphi methodology was chosen as it is an anonymised process of structured interaction between stakeholders, which minimises the risks of forced consensus. Given the potential for power imbalances across the stakeholder groups (parents, practitioners and academics) a Delphi study design was considered a suitable methodology.

After the first round of the questionnaire there was a lack of consensus about the role of the child in decisions about support. Parents and

practitioners were ambivalent about the status of the child and their ability to contribute to decision-making, given their language difficulties. There was also a lack of consensus about the need for 1:1 speech and language therapy outside the classroom for children with DLD. After two rounds, consensus had been reached on eleven of the twelve statements provided. From this, four agreed premises for collaborative practice were proposed. These related to the status of the child; the nature of DLD; the nature of language; and the overarching purpose of IPC in this context.

Discussion of results

Four key points arose from this series of studies. These were: the paradoxical nature of inter-professional collaboration; the professional gaze of speech and language therapy; the unique perspectives of children with DLD; and power-sharing.

The paradoxical nature of inter-professional collaboration

From the integrative review, the identified differences in assumptions provide evidence for the differing cognitive maps and/or systems of orientation of SLTs and teachers.

According to professional socialization theory, these cognitive maps and systems of orientation are deeply rooted in the normative value systems of a given profession and form an integral part of a professional's identity (Arndt *et al.* 2009; King *et al.* 2010). Such cognitive maps are tacitly transmitted when an individual is being socialized into a profession, and practitioners often lack awareness of the ways in which they have been socialised to think (Khalili *et al.* 2014; Joynes 2018). Such cognitive maps secure and protect the exclusivity of professional knowledge and work

practices (Khalili *et al.* 2014). In other words, maintaining professional difference is deemed necessary for the survival of each profession.

Inter-professional collaboration involves building common knowledge at the boundary of each professional's practice (Edwards 2011). It is an inherently risky endeavour for practitioners. Where practitioners feel under threat, they have been shown to try to retain control and revert to traditional roles (San Martín-Rodríguez *et al.* 2005; D'Amour *et al.* 2008; Petri 2010). Further, where practitioners lack insight about the way they think, they have been shown to act in a profession-oriented, rather than a client-orientated, way (Khalili *et al.* 2013; Khalili *et al.* 2014). Such behaviours are known to act as a barrier to IPC (San Martín-Rodríguez *et al.* 2005). This demonstrates the paradoxical nature of inter-professional collaboration and may account for the fact that, despite decades of policy rhetoric, such practice has not yet become a reality.

Most attempts at facilitating IPC have been directed at practitioners themselves, with less focus on inter-professional education (IPE). Key implications for SLT and teacher educators when encouraging IPE are outlined in the final chapter of this thesis.

The professional gaze in speech and language therapy

A striking finding from this research is the professional gaze in speech and language therapy in relation to DLD. First discussed by Foucault in relation to doctors (Foucault 2002; Misselbrook 2013), the concept has been subsequently applied to various therapy professions (Lawlor 2003; Reeve 2006; Eisenberg 2012). It refers to the unconscious act by a professional of selecting only those elements of a person and/or situation

which reinforce/validate the interests, values and norms of their profession. The dominant gaze in speech and language therapy in this research was on the “deficient” child (Graham 2006).

This perspective is at odds with the many calls to reposition the work of SLTs to address the impact of SLCN on an individual’s participation (Washington 2007; Dempsey and Skarakis-Doyle 2010; Westby and Washington 2017) and the literature addressing children’s barriers to learning and participation (Hambly 2014; Graham *et al.* 2018). However, it is consistent with the majority views reported in a recent Delphi study about DLD (Bishop *et al.* 2016; Bishop *et al.* 2017).

In the field of disability studies, such an approach has been criticised for decades, because when focusing solely on an individual’s deficits, the societal barriers such individuals face are not addressed (Shakespeare and Watson 2002; Hughes and Paterson 2006; Kristiansen *et al.* 2008). Focusing solely on the deficits of an individual also undermines the ability of those living with a disability to shape their identity. In a classroom/ school context, reducing stigma and the acknowledging the difficulty of establishing a positive identity are well-documented (Minow 1985; Minow 1991; Norwich 2009; Norwich 2016).

Other disability groups, such as those with physical and/or learning disabilities (Winter 2003), autism (Jaarsma and Welin 2012) and members of the deaf community (Lane 2002) have rejected an impairment-based approach to defining their needs, arguing for the right to shape their own identity. Such groups have made significant gains in influencing research priorities, service planning, policy and legislation, thereby reducing many

barriers to the participation of people with a disability in society. In contrast, the needs of individuals with DLD remain poorly understood and are significantly under-identified which means that they are likely to continue to face considerable barriers to their inclusion during the school years and beyond. It is noteworthy that in the recent debates and efforts to build consensus across SLT about DLD (Bishop 2014; Reilly *et al.* 2014b; Bishop *et al.* 2017) the voices of those living with the condition were not included, nor was the lack of engagement with people who have DLD recognised as being a limitation of the studies.

Contextualising the findings of this research within the broader disability literature raises questions about the ways in which SLTs in pursuit of professional and/or research interests may inadvertently act to disempower those living with speech, language and communication needs. It is important to ensure that people who have DLD are able to influence service planning, research and policy decisions and this is discussed more fully in the next chapter.

The unique perspectives of children with DLD

The children's perspectives in this study were different from both those of parents and those of practitioners in relation to *disability*, *inclusion* and *language*. The children with DLD who participated in this research did not frame their condition as a personal/intrinsic deficit which needed to be remediated, nor as a disability caused by society. Instead, while they acknowledged the existence of their impairment, they focused on the structures and practices around them which acted as additional barriers to their inclusion. Paraphrasing their view, they saw differences in ability as

part of normal human variation. This perspective is well- aligned with recently-proposed sociological models of impairment, which have arisen from a frustration with the dualistic thinking about body and mind of previous models (Baglieri and Knopf 2004; Hughes and Paterson 2006; Oliver and Barnes 2012). Rather than examining the role of society in disabling those with conditions (medical model), or denying the existence of the impaired body (social model), this sociological perspective is based on the assumption that impairment is part of the human condition and is not an abnormal state (Shakespeare and Watson 2001; Shakespeare 2006).

The children in this study were very concerned with issues of exclusion and inclusion. Many of the practices they described were consistent with studies of inclusive practice in schools. For example, they described their ideal classroom and school as one where differences are celebrated and where their peers and teacher expect them to know the answer, rather than being ignored or being made to feel bad about their difficulties. Diversity and presuming competence have been described as fundamental principles of inclusive practice (Florian and Black-Hawkins 2011; Danforth and Naraian 2015).

Views about language were also different. For the children, language was something that varied across contexts and speakers and was seen as a tool for enhancing social status and learning in school. For example, children talked about learning the language of their peers, so that their peers would listen and think they were interesting. Parents and practitioners did not discuss the need to learn how to “code switch” or adapt language for different contexts. Critically for the children, increasing opportunities to use

language for different purposes when learning and thinking in the classroom was the means by which they could make improvement. Parents and practitioners did not discuss this idea of *oracy*, recognised as an important element of best practice for children with SLCN in school (Dockrell *et al.* 2014; Gross 2017).

These children's perspectives are at odds with those of the practitioners - yet in everyday decisions made about support, their views are not routinely taken into account (Kilkelly *et al.* 2004; Bercow 2008; Shevlin and Rose 2008; Roulstone *et al.* 2016; Royal College of Speech and Language Therapists 2018). In research, it is sometimes assumed that parents can be used as proxy informants on behalf of their children (Eadie *et al.* 2018). These findings indicate that each child should be engaged directly in discussions related to their needs, and that, by doing so, their inclusion in school is safeguarded. Implications of these findings are outlined in the final chapter.

Power-sharing

Although the research did not set out to directly explore power imbalances, matters arose over the course of the studies that suggested ambivalence on the part of practitioners and parents about the status of the child.

This ambivalence appeared to influence practitioners' and parents' views about the knowledge the child has about supports in school. Parents and practitioners also were not clear about the rights of a child as advocated by Lundy (2007). Many expressed the opinion that influence should be conditional upon a criterion such as age, with some calling into question a

child's capacity to be included in decisions because of their language ability. Such views may reflect reluctance on the part of practitioners to share their power with children (Tangen 2008; Feiler and Watson 2011).

As the rights of the child to be heard in decisions that affect their lives is one of the most examined issues in Irish health and education policy and in research (Kilkelly *et al.* 2004; Rose and Shevlin 2004; Lundy 2012), this finding was surprising. Despite the many funded initiatives to create spaces for children to have a voice, and many government reports on the issue (National Children's Office 2005; Department of Children and Youth Affairs 2013; Ombudsman for Children Office 2018), the findings of this research suggest that more work is required to reinforce the right of the child to be heard. Implications for practice and policy are outlined in the final chapter of this thesis.

In summary, this research has highlighted the need for inter-professional *education*, if IPC is to be translated meaningfully into practice. The need to empower those with DLD to have influence to inform service and policy decisions related to their condition is also indicated. Findings of this research illustrate the need to ensure children with DLD are meaningfully engaged in collaborative decisions about their own support in school. For this to be achieved, the status of the child as a being their own right needs to be reinforced in policy and practice. Collaborative goals should be contextually-informed, with a focus on optimising classroom discourse for learning and participation. The implications of these findings are further outlined in the final chapter of this thesis.

Methodological considerations

To appraise the trustworthiness of any research, methodological choices need to be made explicit (Mays and Pope 1995; Graneheim and Lundman 2004). Methodological considerations related to the series of studies conducted as part of this doctoral research are discussed here.

In Paper 1, the findings of a cross-sectional analysis of a population-based sample of children in Ireland were reported. This analysis was undertaken to establish whether concerns about the identification of children with SLCN and the delivery of supports in school, as discussed in other countries, were relevant in the Irish context. The limitations of population-based data sets such as GUI for researching disability are well documented. These include terminological issues and the ways that different disability types are categorised, and even the influence of the language used in disability-related questions on parental responses (Bethell *et al.* 2008; Blackburn *et al.* 2010; World Health Organization 2011 ; Loeb 2013). One major weakness of the GUI data set is the lack of child-reported data on the day-to-day impact of the diagnosis from their perspective. Such data are recognised as being important in triangulating parental and/or other reports about disability and for gaining a more nuanced understanding (Mont 2007). Issues of terminology are particularly relevant, given the well-debated issues about DLD (Bishop 2014; Hüneke and Lascelles 2014; Reilly *et al.* 2014b). In the GUI data set, DLD is not an identified category of need. Instead, the broader classification of ‘speech, language and communication needs’ is used, within which DLD forms a subgroup. Therefore, even if more robust methods of calculating prevalence were undertaken (such as

triangulating different sources within the data set - teachers' reports, children's reports and/or clinical data) the findings would not relate specifically to this Irish population with DLD. On the other hand, data about the broader classification of SLCN are certainly pertinent to policy makers and service planners. A further weakness of such a data set is that it does not include specific clinical measures of language. The primary caregiver questionnaire only includes questions about expressive speech and language difficulties, with no reference to difficulties in understanding language. In the absence of such measures, accurate findings about the prevalence of SLCN or the profile of needs of those identified as having SLCN is not possible. While this secondary analysis has limitations, it nevertheless provides evidence from parental reports of the under-identification of SLCN in the Irish population. It also allows the association between different variables of interest related to SLCN, which have been identified elsewhere, to be explored in an Irish context.

In Paper II, the evidence for a shared understanding about DLD in the practice-orientated literature across speech and language and education literature was examined. An integrative method was chosen, which is recommended for addressing complex practice-based questions (Kirkevold 1997; Souza *et al.* 2010). This method enabled the inclusion of diverse sources of practice-relevant literature for analysis, combined with using different types of searches and quality appraisal that were required for such different sources of literature. Following scientific guidelines for integrative reviews published by Cooper (1982) systematic searches of electronic databases of peer-reviewed articles were undertaken to search for empirical

and theoretical papers. Although this approach enhanced the transparency and replicability of the searches, it also may have introduced a bias in the *nature* of the papers included in the study. Such a bias has been the focus of much recent discussion, where the practice of rejecting exploratory and practice-based research has been questioned (Daniels *et al.* 2016; Loder *et al.* 2016). Thus perspectives from speech and language therapy may have been excluded. However practice-based research was included in the sample of education literature from this search strategy.

Several additional steps were taken to enhance the rigour of the integrative review. The study was registered in a prospective international database (Gallagher 2017), setting out our research questions and proposed methods of analysis. According to Stewart *et al.* (2012), prospective registration helps to ensure the integrity of the evidence base upon which health policy and treatment decisions are made. Independent searches and screening of empirical and theoretical papers were undertaken. Empirical papers were independently appraised for quality using a validated tool (Pluye *et al.* 2009; Légaré *et al.* 2011). There was no readily-available validated tool to appraise the quality of the theoretical papers, so a tool was developed specifically for this study, informed by previous research (Walker and Avant 2005). The validity of this tool is therefore untested. An explicit sampling frame for policy papers was agreed a priori, based on findings from a previous international literature review. This enhanced transparency in decision-making about these papers. An independent coder was involved at the initial stage of coding the papers until there was consistency in open coding between the researcher and the coder. This is

recommended as a means of enhancing the credibility of the findings (Toye *et al.* 2014). Including such processes reduces the risk of bias, thereby enhancing the credibility of findings from qualitative research studies (Kitchenham 2004; Ng *et al.* 2014). Limitations of the review are outlined in Paper II. One obvious limitation is that papers were restricted to those available in English, restricting transferability of our findings to other countries. Had a more representative sample of non-English publications been included in the analysis, further commonalities about DLD between SLT and education may have been identified. Further limitations related to the classification of the papers were discussed in the paper.

Including a stakeholder group of SLTs and teachers in the decision-making process when categorising the papers and in the analysis of the data would have enhanced the trustworthiness of the findings. It is interesting that the findings of the subsequent study with stakeholders appeared to support a “pathway of influence” (Barley *et al.* 1988) from research to practice in speech and language therapy, but this pathway was not evident in education. The nature of the differences in perspectives identified in the integrative review of the literature determined the approach to our next study, reported as Paper II. In this study, focus groups and interviews with multiple stakeholders were conducted using *appreciative inquiry* (Cooperrider and Whitney 2005). Appreciative inquiry does not aim to understand a problem in depth in order to generate solutions. Instead, by guiding participants to recall and share positive life experiences, they are encouraged to focus on the *ideal* -in this instance, a speech and language therapy service and supports.

Focus groups were a method of choice for understanding the perspectives of practitioners and parents about services. There are various methodological issues to consider when using focus groups for data collection. According to Stewart and Shamdasani (2014) the first issue relates to sampling. In this study, we used a purposive sampling frame to guide recruitment, ensuring the participants were as representative as possible of the different participant groups. Thus SLTs with different levels of experience representing the range of different speech and language therapy services for children with DLD were recruited, as were teachers working across different types of schools and in a variety of teaching roles. Parents had experience of accessing a wide variety of services. All the children were nearing the end of primary school so they had direct experience of accessing different models of support. All of the children had a diagnosis of DLD, and two had additional emotional/ behavioural needs. The children recruited to the study also had experienced a range of different types of educational provision, including special schools, mainstream schools (urban and rural) as well as special language classes. One limitation of the study is that, despite attempts to recruit an equal number of fathers and mothers, only two fathers took part. Fathers' views about services and supports are therefore poorly represented.

When planning for the focus groups, a further consideration (Kitzinger 1994; Kitzinger 1995) was whether interaction between the participants would be facilitated and/or included in the analysis or would data be analysed as group interviews with participants mainly answering questions posed by the facilitator. As one aim of the study was to establish

the extent to which the views of stakeholders were aligned, interaction between the participants was of interest. Therefore activities which enabled participants to interact without input from the researcher were planned. Following Parker and Tritter (2006), an independent observer attended the group to describe the interaction between the participants and the different contributions made by each. The group observer noted the nature of the interaction across participants at each group using a checklist (Appendix 1). These notes were incorporated into the analysis. Although the groups were planned to facilitate interaction between participants, interaction was not analysed at a discourse level. Instead, the research questions and aims determined the method of analysis, which was thematic (Braun and Clarke 2006). Groups were of a single type (SLTs only, parents only and teachers only) and two were planned as mixed groups to include parents, teachers and SLTs. However, parents expressed a preference to attend a parent-only group rather than a mixed group. Two parents expressed a concern that they didn't think they would be able to get their message across if they were in the same group as SLTs and teachers. As a result only one group was fully "mixed."

When interpreting the findings of the focus groups, it is important to consider that participants often aim to establish common ground (Parker and Tritter 2006), which may have influenced the extent to which participants were willing to express differing views about their ideal service. However, in the mixed groups two events were noted by the observer which suggested that participants did feel able to disagree. Both events occurred during an activity when the participants were required to work together to represent

their ideal service to schools as a picture. Both events related to views of the role of the SLT in school. In one group, a Principal of a school rejected the idea of a more consultative role for the SLT, proposed by the SLT in the group. The Principal stated that an SLT should take joint responsibility for the ways in which the child with DLD can be supported in the classroom. In a further group, when an SLT discussed the idea of indirect models of support, a parent argued against delegating responsibility for delivering support to teachers or other school staff. Instead, the parent proposed that an SLT should work directly in the classroom. These instances suggest that participants in the mixed groups were able to state views that diverged from other group members.

Member-checking of the findings of the focus groups was undertaken with parents and practitioners and refinements made to the final themes, as recommended by Braun and Clarke (2012). Face to face meetings with parents and SKYPE calls with practitioners were organised in order to discuss whether participants felt their views were captured by the analysis. This systematic method is a way of developing overarching themes from qualitative data collected in focus groups and/or interviews and can be used in studies with a wide range of epistemological assumptions. Braun and Clarke (2006) propose three quality indicators when appraising themes using this methodology; coherence, consistency and distinctiveness. The themes generated in this study are distinct, in that each relates to different elements of the ideal services and supports in school (the nature of the ideal supports, the characteristics of the ideal service from an organisational

perspective, the goals of support and the ideal setting). However, within each theme is a coherent description of these elements.

Three key methodological principles should guide the planning research with children: *equality*, *insight*, and *respect* (Clark *et al.* 2003; Alderson 2005). In some studies, children are viewed as the object of research and are tested and/or studied from this perspective. In this study, guided by the principle of equality, the children were considered subjects in the research and experts in their own lives. This had implications for sampling, for data collection methods, and the choice of tools for analysis. For example, the children were asked to provide an analysis of their own drawings, rather than the researcher attempting to analyse these on behalf of the children. To gain insights into the lives of children, the interviews consisted of a conversation and were introduced as such. Planned activities took into account the best methods to enable each child to be heard (Alderson 2005). Draw-and-tell activities were used (see Appendix 2) rather than only talking, reflecting an awareness of the communication culture of children (Dockett *et al.* 2013). Some of many ethical considerations when undertaking research with children are discussed in the next section.

Steps were taken to enhance the transparency of the reporting of the findings from both the focus groups and the interviews with children. These included the extensive use of direct quotes, considered important to establish the credibility of the themes (Sandelowski 1994), as well as the use of a ‘consolidated criteria for reporting qualitative research’ checklist (Allison Tong *et al.* 2007) to ensure sufficient details are reported to allow for the overall quality and credibility of the research to be appraised.

The final phase of the research involved exploring agreement and disagreement about topics of contention identified in the early studies. This was completed with a purposive sample of informed individuals known to have a diverse range of perspectives about DLD (**Paper IV**). A Delphi methodology was chosen as this is particularly useful when little is known about a practice-related topic and where agreement about 'best practices' is desirable (Mead and Moseley 2001; Graham *et al* 2003, Hardy *et al* 2004). However, enhancing rigour when using a Delphi methodology is challenging for researchers (Keeney *et al.* 2001; Keeney *et al.* 2006; Hasson and Keeney 2011).

There is a lack of agreement about what defines an expert which means, according to (Sumsion 1998), that essentially it is left to each researcher to choose the most suitable group of experts, and to defend their choice. Narrow definitions of expertise based on roles and responsibilities and/or professional qualifications alone have been widely criticised (Sumsion 1998; Baker *et al.* 2006). Researchers have found little difference when comparing results from samples of experts and non-experts within a professional group (Duffield 1993; Walker 1994). Several researchers have proposed that the term "informed individual" should be used, thus allowing for different types of knowledge and experience to be included, such as the insights that service users may bring (Keeney *et al.* 2006). This definition was used for the final (Delphi) study.

A further methodological consideration when using a Delphi method relates to ensuring the heterogeneity of the sample, which is critical for enhancing the trustworthiness of the results (Hasson *et al.* 2000; Baker *et al.*

2006; Hasson and Keeney 2011). Informed by the literature, a ‘knowledge resource nomination sheet’ (Okoli and Pawlowski 2004) was prepared a priori. This set out the criteria for recruitment, allowed for a systematic approach to recruitment, and ensured that a range of perspectives was included from researchers and practitioners in speech and language therapy and in education, as well as from parents. Such an approach minimises bias in a sample when recruiting to the study (Okoli and Pawlowski 2004).

A further risk of bias, particularly when applying a Delphi methodology, relates to the analysis undertaken between rounds. To reduce the risk of bias, an independent coder analysed 100% of the qualitative content between each round of the Delphi.

Reflexivity - the need to “self-monitor the impact of one’s biases, beliefs and personal experience on their research” (Berger 2013, p.220) is recognised as crucial in generating knowledge. Given the nature of the research approach and questions, and the fact that the key researcher had practised as an SLT for many years, working with parents, teachers and children with DLD, reflexivity was an important consideration when planning and conducting the research. Throughout the research process, a reflective diary and analytical notes were kept by the primary researcher, which were discussed regularly at supervision meetings. An independent listener was engaged during the analysis of the literature and of the focus groups and interview data. The role of this individual was to put forward alternative explanations for patterns in the data, which the researcher either refuted with reference to the data, or adopted as part of the analysis. Such opportunities were made possible by using a specialist software programme

N-VIVO (QSR International 2000) to manage the data, allowing all coding decision to be recorded, tracked and then interrogated by others.

Ethical considerations

Ethical approval was granted by the Faculty of Education and Health Sciences' Human Ethics Committee at the University of Limerick in October 2016. As part of this process, posters were developed for each phase of the study to explain the purpose of the phase and what was involved (Appendix 3 and 4).

To recruit to the focus groups and interviews, posters were circulated to SLT and teacher organisations and to special interest groups (SIGs) in special education/DLD. Posters designed for parents and children were also circulated to the organisers of a national parent support group for children with DLD. It was made clear at all times to all potential subjects, that participation was voluntary. When practitioners and parents contacted the researcher(s) to register their interest in taking part in the study, phone calls or meetings were arranged, based on the expressed preference of the potential volunteer. Following contact, a more detailed information sheet was sent, with a consent form, to those still interested. At this point, some parents decided not to take part. Where parents got in touch on behalf of their child, adapted versions of the information sheets were sent for the parent to talk through with their child.

For all of the children involved in the study, both a written consent from the parent and an assent form signed by child were required (Appendix 5). The issue of assent is recognised as particularly important when conducting research with children (Dockett and Perry 2011; Merrick 2011).

Seeking assent ensures that children “understand clearly what they are doing and voluntarily choose to contribute” (Chawla 2002, p.16). Gaining assent is not a once-off activity, but must be actively sought throughout the process of data collection (Flewitt 2005; Einarsdottir 2007; Dockett and Perry 2011). At the beginning of each interview, the researcher introduced herself as a student researcher. This was followed by a discussion about different types of conversations that a child might have with an adult or person in authority, in some of which they have to take part, and others where they do not. This reinforced the idea that this conversation would not be similar to that which might occur in school with a teacher or other adult, and that the child could decide if they wished to keep talking or not.

Other methods of signalling withdrawal of assent were also introduced at the beginning of the interview. Children were each given red, orange and green cards coloured cards. During the interview activities, children could use the cards to signal if they were happy to continue by showing the green card, unclear or unsure or requiring clarification by showing the orange card, and unhappy to take part by showing the red card. During the interviews, the researcher was also alert to any non-verbal signs of withdrawal of assent, as recommended by Cocks (2006). Children were given the option of keeping the pictures and drawings they had created during the interviews or allowing the researcher to take them.

An ethical issue arose, when parents were re-contacted at the end of the analysis phase to ask if a further visit was possible in order to discuss the findings with their child. Of the parents who had given consent to be re-contacted regarding the results at the time of interview, only one agreed to a

further visit with their child at this later stage. The other parents expressed a preference for a summary of the findings to be sent for them to discuss with their child, agreeing to get in touch with the child's comments. The same reason was given by two parents. Both stated that their child's mental health had deteriorated since their transition to secondary school. Only one parent agreed to a further visit but cancelled the appointment on the day. The researcher suggested that the parent get in touch with a suitable future date but no further contact was received. No feedback was received from parents about the summary findings. Thus the findings from the interviews with children were not fully member-checked. In future research, we propose a different methodology be used where children will be engaged directly throughout the analysis.

Data security and management

Accessing the GUI data set involved a lengthy application process, with the researchers submitting a detailed proposal of the research questions to be addressed, and why access to the non-anonymised version of the database was required. The researcher, supervisor, and an additional researcher with experience of analysing population-based samples, applied together to access the database. They undertook mandatory training and signed contracts in relation to data protection and confidentiality.

To conduct the analysis, a secure Internet Protocol (IP) address had to be identified and access to the portal was limited to the device where this address was registered. All analyses were undertaken using a secure portal and no data could be exported from this shared drive unless researchers at the Central Statistics Office of Ireland had reviewed the output and were

satisfied that no participants involved in the study were identifiable. No identifying information was used when reporting the findings of any study. Where direct quotes were included in papers (Paper III, IV and VI) codes have been used, rather than names. Hard copy data are currently stored in a locked filing cabinet at the University of Limerick, and electronically via a password-protected drive. After seven years have passed, all data will be destroyed as per General Data Protection Regulation requirements.

Personal reflections

I maintained a reflective journal to document my response to the research process. This was important as I had worked for many years as an SLT in the same area of practice that I was now researching. Doing so allowed me to make explicit my emotional response to the process when planning, collecting and analysing data. In this section, I present my reflections on one particular response I experienced, that of frustration towards my profession. I discuss how by the end of the research, I was able, through reflection, to reconnect with my profession and my own professional identity in a positive way.

During the analysis of the speech and language therapy literature, it became apparent that the dominant perspective was about understanding DLD as a disease/ medical condition. Many of the papers were focussed on establishing the diagnostic boundaries of DLD and in testing the efficacy of techniques to improve specific areas of language deficits within the child. I realised that much of my own practice had been aligned with this perspective. As I read the inclusive education literature, I began to feel

increasingly frustrated about this perspective in SLT as I began to wonder about the unintended consequences of such an approach to childhood disability for those living with the condition. I wondered whether I myself had worked in a way which may have unintentionally stigmatised the children I had tried to help. I noted that I was becoming overly critical of the SLT perspective and raised the question at supervision. I discussed the fact that I was experiencing negative feelings towards my profession and that I was finding it difficult to maintain a critical distance when analysing the speech and language therapy papers. It was decided that I would present my analysis to my supervisors at several points throughout the process so that they could explore this issue with me. This process of challenging me about my findings and the need to revisit the analysis with alternative hypothesis allowed me to gain a more critical distance from the research and to take on more of an outsider perspective in analysing the data.

This process of reflection also allowed me to develop an awareness of the ways my own thinking has changed throughout the research journey. When I embarked upon the research, I had practiced in the role of a consultant SLT i.e. as an “expert” in schools, advising staff and families about what they needed to do to meet the speech and language needs of the child. As I analysed the literature and later spoke to parents, and in particular the children, I realised that this was not the role stakeholders wanted the SLT to fulfil. As a result of listening to these stakeholders, and particularly the children, I recognised that my own thinking about how SLTs should work in school had changed.

I continued to maintain this reflective diary throughout the other phases of the research to document my responses as the research progressed. Doing so allowed me to make sense of my own role in the development of the premises for practice. Ultimately, through reflection, I was able to reconnect with my profession in a positive way and have come to recognise that SLTs do have unique knowledge and skills that they can bring to working in schools to meet the needs of children with DLD if they can work in an inclusive way.

References

- Alderson, P. (2005) 'Designing ethical research with children', *Ethical research with children*, 27-36.
- Arndt, J., King, S., Suter, E., Mazonde, J., Taylor, E. and Arthur, N. (2009) 'Socialization in health education: Encouraging an integrated interprofessional socialization process', *Journal of Allied Health*, 38(1), 18-23.
- Baglieri, S. and Knopf, J.H. (2004) 'Normalizing difference in inclusive teaching', *J Learn Disabil*, 37(6), 525-9.
- Baker, J., Lovell, K. and Harris, N. (2006) 'How expert are the experts? An exploration of the concept of 'expert' within Delphi panel techniques', *Nurse researcher*, 14(1), 59-70.
- Barley, S.R., Meyer, G.W. and Gash, D.C. (1988) 'Cultures of culture: Academics, practitioners and the pragmatics of normative control', *Administrative science quarterly*, 33(Mar 88), 24-60.
- Bercow, J. (2008) *Bercow review of services for children and young people (0-19) with speech, language and communication needs*, Nottingham: DCSF Publications, available: <https://www.local.gov/item/2008431566/>.
- Berger, R. (2013) 'Now i see it, now i don't: Researcher's position and reflexivity in qualitative research', *Qualitative Research*, 15(2), 219-234.
- Bethell, C.D., Read, D., Blumberg, S.J. and Newacheck, P.W. (2008) 'What is the prevalence of children with special health care needs? Toward an understanding of variations in findings and methods across three national surveys', *Maternal and child health journal*, 12(1), 1-14.
- Bishop, D.V. (2014) 'Ten questions about terminology for children with unexplained language problems', *International Journal of Language and Communication Disorders*, 49(4), 381-415.

- Bishop, D.V., Snowling, M.J., Thompson, P.A. and Greenhalgh, T. (2016) 'Catalise: A multinational and multidisciplinary delphi consensus study. Identifying language impairments in children', *PLoS ONE* [online], available: <https://doi.org/10.1371/journal.pone.0168066>
- Bishop, D., Snowling, M.J., Thompson, P. and Greenhalgh, T. (2017) 'Phase 2 of catalise: A multinational and multidisciplinary delphi consensus study of problems with language development: Terminology', *Journal of Child Psychology and Psychiatry*, 58: 1068-1080.
- Blackburn, C.M., Spencer, N.J. and Read, J.M. (2010) 'Prevalence of childhood disability and the characteristics and circumstances of disabled children in the uk: Secondary analysis of the family resources survey', *BMC Pediatrics*, 10(1), 1.
- Braun, V. and Clarke, V. (2006) 'Using thematic analysis in psychology', *Quality Research in Psychology*, 3(2), 77-101.
- Braun, V. and Clarke, V. (2012) 'Thematic analysis' in Cooper, H., Camic, P.M., Long, D.L., Panter, A.T., Rindskopf, D. and. Sher K.R., eds., *APA handbook of research methods in psychology: Research designs: Quantitative, qualitative, neuropsychological, and biological*, Washington, DC, US: American Psychological Association, 57-71.
- Chawla, L. (2002) "“Insight, creativity and thoughts on the environment”: Integrating children and youth into human settlement development', *Environment and Urbanization*, 14(2), 11-22.
- Clark, A., McQuail, S. and Moss, P. (2003) *Exploring the field of listening to and consulting with young children*, London: DEPARTMENT OF EDUCATIONS, available: <http://www.ness.bbk.ac.uk/support/GuidanceReports/documents/172.pdf> [accessed 3 May 2019].
- Cocks, A.J. (2006) 'The ethical maze: Finding an inclusive path towards gaining children’s agreement to research participation', *Childhood*, 13(2), 247-266.

- Cooper, H.M. (1982) 'Scientific guidelines for conducting integrative research reviews', *Review of Educational Research*, 52(2), 291-302.
- Cooperrider, D. and Whitney, D.D. (2005) *Appreciative inquiry: A positive revolution in change*, CA: Berrett-Koehler Publishers.
- D'Amour, D., Goulet, L., Labadie, J.-F., Martín-Rodríguez, L.S. and Pineault, R. (2008) 'A model and typology of collaboration between professionals in healthcare organizations', *BMC Health Services Research* [online], available: <http://dx.doi.org/10.1186/1472-6963-8-188>.
- Danforth, S. and Naraian, S. (2015) 'This new field of inclusive education: Beginning a dialogue on conceptual foundations', *Intellectual Developmental Disability*, 53(1), 70-85.
- Daniels, K., Loewenson, R., George, A., Howard, N., Koleva, G., Lewin, S., Marchal, B., Nambiar, D., Paina, L., Sacks, E., Sheikh, K., Tetui, M., Theobald, S., Topp, S.M. and Zwi, A.B. (2016) 'Fair publication of qualitative research in health systems: A call by health policy and systems researchers', *International Journal for Equity in Health* [online], available: <http://dx.doi.org/10.1186/s12939-016-0368-y>.
- Dempsey, L. and Skarakis-Doyle, E. (2010) 'Developmental language impairment through the lens of the icf: An integrated account of children's functioning', *Journal of communication disorders*, 43(5), 424-437.
- Department of Children and Youth Affairs (2013) *Better outcomes and brighter future*, Dublin: Stationary Office, available: https://www.dcy.a.gov.ie/documents/cypp_framework/BetterOutcomesBetterFutureReport.pdf [accessed 10June 2019].
- Dockett, S. and Perry, B. (2011) 'Researching with young children: Seeking assent', *Child Indicators Research*, 4(2), 231-247.

- Dockett, S., Perry, B. and Kearney, E. (2013) 'Promoting children's informed assent in research participation', *International Journal of Qualitative Studies in Education*, 26(7), 802-828.
- Dockrell, Lindsay, G., Roulstone, S. and Law, J. (2014) 'Supporting children with speech, language and communication needs: An overview of the results of the better communication research programme', *International Journal of Language and Communication Disorders*, 49(5), 543-557.
- Duffield, C. (1993) 'The Delphi technique: A comparison of results obtained using two expert panels', *International Journal of Nursing Studies*, 30(3), 227-237.
- Eadie, P., Conway, L., Hallenstein, B., Mensah, F., McKean, C. and Reilly, S. (2018) 'Quality of life in children with developmental language disorder', *International Journal of Language and Communication Disorders*, 53(4), 799-810.
- Economic and Social Research Institute. (2014) *Growing up in Ireland Child Cohort Wave 2 - 13 years*, [data set], V.1, Irish Social Science Data Archive, Central Statistic Office, Ireland, available: <http://www.ucd.ie/issda/data/GUChild/GUChildWave2> [accessed 7 Aug 2019].
- Edwards, A. (2011) 'Building common knowledge at the boundaries between professional practices: Relational agency and relational expertise in systems of distributed expertise', *International Journal of Educational Research*, 50(1), 33-39.
- Einarsdottir, J. (2007) 'Research with children: Methodological and ethical challenges', *European Early Childhood Education Research Journal*, 15(2), 197-211.
- Eisenberg, N.R. (2012) 'Post-structural conceptualizations of power relationships in physiotherapy', *Physiotherapy Theory and Practice*, 28(6), 439-446.

- Feiler, A. and Watson, D. (2011) 'Involving children with learning and communication difficulties: The perspectives of teachers, speech and language therapists and teaching assistants', *British Journal of Learning Disabilities*, 39(2), 113-120.
- Flewitt, R. (2005) 'Conducting research with young children: Some ethical considerations', *Early Child Development and Care*, 175(6), 553-565.
- Florian, L. and Black-Hawkins, K. (2011) 'Exploring inclusive pedagogy', *British Educational Research Journal*, 37(5), 813-828.
- Foucault, M. (2002) *The birth of the clinic*, London: Routledge.
- Gallagher, A. L., Murphy, CA., Conway, P. F. and Perry A. (2017) 'Examining the evidence for a shared conceptual understanding across speech and language therapy and education in meeting the needs of children with developmental language disorders in mainstream education: An integrative review', Prospero: International Prospective Register of Systematic Reviews, available: http://Www.Crd.York.Ac.Uk/Prospero/Display_Record.Php?Id=Crd42016048575 [accessed 12 Aug 2019].
- Gallagher, A., Murphy, CA., Conway, P. F. and Perry, A. (2019a) 'Consequential differences in perspectives and practices concerning children with developmental language disorders: An integrative review', *International Journal of Language and Communication Disorders*, 54(4), 529-552.
- Gallagher, A., Murphy, C., Conway, P.F. and Perry, A. (2019b) 'Engaging multiple stakeholders to improve speech and language therapy services in schools: An appreciative inquiry-based study', *BMC Health Services Research* [online], available: <http://dx.doi.org/10.1186/s12913-019-4051-z>.
- Giangreco, M.F. (2000) 'Clinical forum. Related services research for students with low-incidence disabilities: Implications for speech-

language pathologists in inclusive classrooms', *Language, Speech and Hearing Services in Schools*, 31(3), 230-307.

Graham, L.J. (2006) 'Caught in the net: A foucaultian interrogation of the incidental effects of limited notions of inclusion', *International Journal of Inclusive Education*, 10(1), 3-25, available: <http://dx.doi.org/10.1080/13603110500173217>.

Graham, L.J., Tancredi, H., Willis, J. and McGraw, K. (2018) 'Designing out barriers to student access and participation in secondary school assessment', *The Australian Educational Researcher*, 45(1), 103-124.

Graneheim, U.H. and Lundman, B. (2004) 'Qualitative content analysis in nursing research: Concepts, procedures and measures to achieve trustworthiness', *Nurse Education Today*, [online], available: <http://dx.doi.org/10.1016/j.nedt.2003.10.001>.

Gross, J. (2017) *Time to talk: Implementing outstanding practice in speech, language and communication*, London: Routledge.

Grunwell, P. (1983) 'Phonological therapy: Premises, principles and procedures', in Edwards, M., Miller, C.J. and de Montfort-Supple, M., eds., *XIXth Congress of the International Association of Logopedics and Phoniatrics*, University of Edinburgh, Scotland, 14-18 Aug, Switzerland: Karger, available: <http://dx.doi.org/10.1159/000316868>.

Hambly, H. (2014) *Children's, parents', peers' and professionals' experiences of language impairment: A multi-perspective study to identify psychosocial goals for intervention*, unpublished thesis (Ph.D), University of the West of England, available: <https://uwe-repository.worktribe.com/output/817115>.

Hartas, D. (2004) 'Teacher and speech-language therapist collaboration: Being equal and achieving a common goal?', *Child Language Teaching and Therapy*, 20(1), 33-54.

- Hasson, F. and Keeney, S. (2011) 'Enhancing rigour in the Delphi technique research', *Technological Forecasting and Social Change*, 78(9), 1695-1704.
- Hasson, F., Keeney, S. and McKenna, H. (2000) 'Research guidelines for the Delphi survey technique', *Journal of Advanced Nursing*, 32(4), 1008-1015.
- Hughes, B. and Paterson, K. (2006) 'The social model of disability and the disappearing body: Towards a sociology of impairment', *Disability and Society*, 12(3), 325-340.
- Hüneke, A. and Lascelles, L. (2014) 'Terminology mayhem: Why it matters—the ramifications for parents and families', *International Journal of Language and Communication Disorders*, 49(4), 410-412.
- Jaarsma, P. and Welin, S. (2012) 'Autism as a natural human variation: Reflections on the claims of the neurodiversity movement', *Health Care Analysis*, 20(1), 20-30.
- Joynes, V.C.T. (2018) 'Defining and understanding the relationship between professional identity and interprofessional responsibility: Implications for educating health and social care students', *Advances in health sciences education : theory and practice*, 23(1), 133-149.
- Keeney, S., Hasson, F. and McKenna, H. (2006) 'Consulting the oracle: Ten lessons from using the Delphi technique in nursing research', *Journal of Advanced Nursing*, 53(2), 205-212.
- Keeney, S., Hasson, F. and McKenna, H.P. (2001) 'A critical review of the Delphi technique as a research methodology for nursing', *International Journal of Nursing Studies*, 38(2), 195-200.
- Khalili, H., Hall, J. and DeLuca, S. (2014) 'Historical analysis of professionalism in western societies: Implications for

interprofessional education and collaborative practice', *Journal of Interprofessional Care*, 28(2), 92-97.

Khalili, H., Orchard, C., Laschinger, H.K.S. and Farah, R. (2013) 'An interprofessional socialization framework for developing an interprofessional identity among health professions students', *Journal of Interprofessional Care*, 27(6), 448-453.

Kilkelly, U., Kilpatrick, R., Lundy, L., Moore, L., Scraton, P., Davey, C., Dwyer, C. and McAlister, S. (2004) *Children's rights in Northern Ireland*, available: [https://pure.qub.ac.uk/portal/en/publications/childrens-rights-in-northern-ireland-2004\(ffd5d134-9e45-40cc-9ecc-56f51f1b573c\)/export.html](https://pure.qub.ac.uk/portal/en/publications/childrens-rights-in-northern-ireland-2004(ffd5d134-9e45-40cc-9ecc-56f51f1b573c)/export.html).

King, G., Shaw, L., Orchard, C.A. and Miller, S. (2010) 'The interprofessional socialization and valuing scale: A tool for evaluating the shift toward collaborative care approaches in health care settings', *Work*, 35(1), 77-85.

Kirkevold, M. (1997) 'Integrative nursing research -- an important strategy to further the development of nursing science and nursing practice', *Journal of Advanced Nursing*, 25(5), 977-984.

Kitchenham, B. (2004) 'Procedures for performing systematic reviews', *Keele, UK, Keele University*, 33(2004), 1-26.

Kitzinger, J. (1994) 'The methodology of focus groups: The importance of interaction between research participants', *Sociology of health and illness*, 16(1), 103-121.

Kitzinger, J. (1995) 'Qualitative research: Introducing focus groups', *British Medical Journal [online]*, available: <http://dx.doi.org/10.1136/bmj.311.7000.299>.

Kristiansen, K., Vehmas, S. and Shakespeare, T. (2008) *Arguing about disability: Philosophical perspectives*, London: Routledge.

- Lane, H. (2002) 'Do deaf people have a disability?', *Sign language studies*, 2(4), 356-379.
- Law, J., Lindsay, G., Peacey, N., Gascoigne, M., Soloff, N., Radford, J. and Band, S. (2002) 'Consultation as a model for providing speech and language therapy in schools: A panacea or one step too far?', *Child Language Teaching and Therapy*, 18(2), 145-163.
- Lawlor, M.C. (2003) 'Gazing anew: The shift from a clinical gaze to an ethnographic lens', *The American Journal of Occupational Therapy*, 57(1), 29-39.
- Légaré, F., Stacey, D., Brière, N., Desroches, S., Dumont, S., Fraser, K., Murray, M-A., Sales, A. and Aubé, D. (2011) 'A conceptual framework for interprofessional shared decision making in home care: Protocol for a feasibility study', *BMC Health Services Research*, 11(1), 23-29.
- Lindsay, G. and Dockrell, J. (2004) 'Whose job is it? Parents' concerns about the needs of their children with language problems', *Journal of Special Education*, 37(4), 225-235.
- Loder, E., Groves, T., Schroter, S., Merino, J.G. and Weber, W. (2016) 'Qualitative research and the BMJ,' *British Medical Journal* [online], available: <http://dx.doi.org/10.1136/bmj.i641>.
- Loeb, M. (2013) 'Disability statistics: An integral but missing (and misunderstood) component of development work', *Nordic Journal of Human Rights*, 31(3), 306-324.
- Lundy, L. (2007) 'Voice' is not enough: Conceptualising article 12 of the united nations convention on the rights of the child', *British Educational Research Journal*, 33(6), 927-942.
- Lundy, L. (2012) 'Children's rights and educational policy in Europe: The implementation of the United Nations Convention on the Rights of the Child', *Oxford Review of Education*, 38(4), 393-411.

- Martin, D. (2008) 'A new paradigm to inform inter-professional learning for integrating speech and language provision into secondary schools: A socio-cultural activity theory approach', *Child Language Teaching and Therapy*, 24(2), 173-192.
- Mays, N. and Pope, C. (1995) 'Qualitative research: Rigour and qualitative research', *British Medical Journal*, 311(6997), 109-112.
- McCartney, E. (1999) 'Barriers to collaboration: An analysis of systemic barriers to collaboration between teachers and speech and language therapists', *International Journal of Language and Communication Disorders*, 34(4), 431-440.
- McCartney, E. (2002) 'Cross-sector working: Speech and language therapists in education', *Journal of Management in Medicine*, 16(1), 67-77.
- McCartney E (2000) 'Include us out? Speech and language therapists' prioritization in mainstream schools', *Child Language Teaching and Therapy*, 16(2), 165-180.
- McCartney, E., Boyle, J., Ellis, S., Bannatyne, S. and Turnbull, M. (2011) 'Indirect language therapy for children with persistent language impairment in mainstream primary schools: Outcomes from a cohort intervention', *International Journal of Language and Communication Disorders*, 46(1), 74-82.
- McKean, C., Law, J., Laing, K., Cockerill, M., Allon - Smith, J., McCartney, E. and Forbes, J. (2017) 'A qualitative case study in the social capital of co-professional collaborative co-practice for children with speech, language and communication needs', *International Journal of Language and Communication Disorders*, 52(4), 514-527.
- Merrick, R. (2011) 'Ethics, consent and assent when listening to children with speech, language communication needs', *Listening to children*

and young people with speech, language and communication needs.
Guilford, UK: J and R Press Ltd, 63-72.

Merrick, R. and Roulstone, S. (2011) 'Children's views of communication and speech-language pathology', *International Journal of Speech-Language Pathology*, 13(4), 281-290.

Minow, M. (1985) 'Learning to live with the dilemma of difference: Bilingual and special education', *Law and Contemporary Problems*, 48(2), 157-211.

Minow, M. (1990) *Making all the difference: Inclusion, exclusion, and American law*, New York: Cornell University Press.

Misselbrook, D. (2013) 'Foucault', *The British Journal of General Practice*, 63(611), 312-312.

Mont, D. (2007) *Measuring disability prevalence*, Washington, DC: World Bank, available: <http://documents.worldbank.org/curated/en/578731468323969519/Measuring-disability-prevalenceWashingtonWorldBank>.

National Children's Office (2005) *Young voices*, available: https://www.dcy.gov.ie/documents/publications/31267_Young_Voices.pdf [accessed 3 Jan 2019].

Ng, L., Pitt, V., Huckvale, K., Clavisi, O., Turner, T., Gruen, R. and Elliott, J.H. (2014) 'Title and abstract screening and evaluation in systematic reviews (taser): A pilot randomised controlled trial of title and abstract screening by medical students', *Systematic Reviews* [online], available: <http://dx.doi.org/10.1186/2046-4053-3-121>.

Norwich, B. (2009) 'Dilemmas of difference and the identification of special educational needs/disability: International perspectives', *British Educational Research Journal*, 35(3), 447-467.

Norwich, B. (2016) 'Conceptualizing special educational needs using a biopsychosocial model in England: The prospects and challenges of

using the international classification of functioning framework', *Frontiers in Education* [online], available: <http://dx.doi.org/10.3389/feduc.2016.00005>.

Okoli, C. and Pawlowski, S.D. (2004) 'The Delphi method as a research tool: An example, design considerations and applications', *Information and Management*, 42(1), 15-29.

Oliver, M. and Barnes, C. (2012) 'Back to the future: The world report on disability', *Disability and Society*, 27(4), 575-579.

Ombudsman for Children Office (2018) *Joining the dots*, available: <https://www.oco.ie/childrens-rights/consulting-with-young-people/joining-the-dots/> [accessed 7 Aug 2019].

Owen, R., Hayett, L. and Roulstone, S. (2004) 'Children's views of speech and language therapy in school: Consulting children with communication difficulties', *Child Language Teaching and Therapy*, 20(1), 55-73.

Parker, A. and Tritter, J. (2006) 'Focus group method and methodology: Current practice and recent debate', *International Journal of Research and Method in Education*, 29(1), 23-37.

Petri, L. (2010) 'Concept analysis of interdisciplinary collaboration', *Nursing Forum*, 45(2), 73-82.

Pluye, P., Gagnon, M.P., Griffiths, F. and Johnson-Lafleur, J. (2009) 'A scoring system for appraising mixed methods research, and concomitantly appraising qualitative, quantitative and mixed methods primary studies in mixed studies reviews', *International Journal of Nursing Studies* [online], available: <http://dx.doi.org/10.1016/j.ijnurstu.2009.01.009>.

QSR International (2016) *Nvivo qualitative data analysis software* (V.11) [accessed 2 June 2018].

- Reeve, D. (2006) 'Towards a psychology of disability: The emotional effects of living in a disabling society', in Goodley, D. and Lawthom, R., eds., *Disability and Psychology: Critical Introductions and Reflections*, London: Palgrave, 94-107.
- Reilly, S., Tomblin, B., Law, J., McKean, C., Mensah, F.K., Morgan, A., Goldfeld, S., Nicholson, J.M. and Wake, M. (2014b) 'Specific language impairment: A convenient label for whom?', *International Journal of Language and Communication Disorders*, 49(4), 416-51.
- Rose, R. and Shevlin, M. (2004) 'Encouraging voices: Listening to young people who have been marginalised', *Support for learning*, 19(4), 155-161.
- Roulstone, S., Coad, J., Ayre, A., Hambly, H. and Lindsay, G. (2012) *The preferred outcomes of children with speech, language and communication needs and their parents*, London: Department of Education, available: <https://www.gov.uk/government/publications/the-preferred-outcomes-of-children-with-speech-language-and-communication-needs-and-their-parents> [accessed 2 May 2019].
- Roulstone, S., Harding, S. and Morgan, L. (2016) *Exploring the involvement of children and young people who have speech, language and communication needs, and their families in decision-making*, London: Department of Education, available: https://www.thecommunicationtrust.org.uk/media/443274/tct_involvingcyp_research_report_final.pdf [accessed 3 May 2018].
- Roulstone, S. and McLeod, S. (2011) *Listening to children and young people with speech, language and communication needs*, London: J and R Press Limited.
- Royal College of Speech and Language Therapists (2018) *Bercow- ten years on*, available: <https://www.bercow10yearson.com/> [accessed 10 Feb 2019].

- Sandelowski, M. (1994) 'Focus on qualitative methods. The use of quotes in qualitative research', *Research in nursing and health*, 17(6), 479-482.
- San Martín-Rodríguez, L.S., Beaulieu, M.-D., D'Amour, D. and Ferrada-Videla, M. (2005) 'The determinants of successful collaboration: A review of theoretical and empirical studies', *Journal of Interprofessional Care*, 19(1), 132-147.
- Shakespeare, T. (2006) 'The social model of disability' in Davis, L.J., eds., *The Disability Studies Reader*, London: Psychology Press, 197-204.
- Shakespeare, T. and Watson, N. (2002) 'The social model of disability: An outdated ideology?' *Research in Social Science and Disability*, 42(2), 9-28.
- Shevlin, M. and Rose, R. (2008) 'Pupils as partners in education decision - making: Responding to the legislation in england and ireland', *European Journal of Special Needs Education*, 23(4), 423-430.
- Souza, M.T., Silva, M.D. and Carvalho, R.D. (2010) 'Integrative review: What is it? How to do it?', *Einstein*, 8(1), 102-106.
- Stewart, D.W. and Shamdasani, P.N. (2014) *Focus groups: Theory and practice*, 3rd ed., Washington DC: SAGE Publications.
- Stewart, L., Moher, D. and Shekelle, P. (2012) 'Why prospective registration of systematic reviews makes sense', *Systematic Reviews*, 1, 7-7, available: <http://dx.doi.org/10.1186/2046-4053-1-7>.
- Sumsion, T. (1998) 'The Delphi technique: An adaptive research tool', *British Journal of Occupational Therapy*, 61(4), 153-156.
- Tangen, R. (2008) 'Listening to children's voices in educational research: Some theoretical and methodological problems', *European Journal of Special Needs Education*, 23(2), 157-166.

- Tollerfield, I. (2003) 'The process of collaboration within a special school setting: An exploration of the ways in which skills and knowledge are shared and barriers are overcome when a teacher and speech and language therapist collaborate', *Child Language Teaching and Therapy*, 19(1), 67-84.
- Tomblin, J. (2006) 'A normativist account of language-based learning disability', *Learning Disabilities Research and Practice*, 21(1), 8-18,
- Tong, A., Sainsbury, P. and Craig, J. (2007) 'Consolidated criteria for reporting qualitative research (coreq): A 32-item checklist for interviews and focus groups', *International Journal for Quality in Health Care*, 19(6), 349-357, available: <http://dx.doi.org/10.1093/intqhc/mzm042>.
- Toye, F., Seers, K., Allcock, N., Briggs, M., Carr, E. and Barker, K. (2014) 'Meta-ethnography 25 years on: Challenges and insights for synthesising a large number of qualitative studies', *BMC Medical Research Methodology* [online], available: <http://dx.doi.org/10.1186/1471-2288-14-80>.
- Walker, A.M. (1994) 'A Delphi study of research priorities in the clinical practice of physiotherapy', *Physiotherapy*, 80(4), 205-207.
- Walker, L. O. and Avant, K. C. (2005) *Strategies for theory construction in nursing*, 4th ed., Philadelphia, USA: Lippincott, Williams and Wilkins.
- Washington, K.N. (2007) 'Using the icf within speech-language pathology: Application to developmental language impairment', *Advances in Speech Language Pathology*, 9(3), 242-255.
- Westby, C. and Washington, K.N. (2017) 'Using the international classification of functioning, disability and health in assessment and intervention of school-aged children with language impairments', *Language, Speech, and Hearing Services in Schools*, 48(3), 137-152.

Winter, J.A. (2003) 'The development of the disability rights movement as a social problem solver', *Disability Studies Quarterly*, 23(1), 33-58.

Conclusions

Originality of the research

The purpose of this research was to characterise the perspectives of those involved in the collaborative planning of support in school to meet the needs of children with DLD, and to develop agreed premises for best collaborative practice. A mixed methods design by Creswell and Clark (2007) was employed as this was most suited to addressing these aims.

The research questions were influenced by observations from practice. Thus the research involved the use of novel practice-based methods of inquiry. For example when interrogating the literature, an integrative method of review was employed. This involved searches across two fields of practice and included three different sources of literature. Although not without its challenges, the method allowed for a comprehensive approach in addressing the research questions of this study.

This is the first study in Ireland to engage children with DLD as experts in their own lives with the aim of improving SLT services to schools. The use of appreciative inquiry to facilitate the engagement of the children in designing their optimal support/services to school is novel. The views of children with DLD were kept central when developing the premises to underpin good future practice. Thus the premises have the potential to promote more child-centred practice in schools.

An unique feature of the research is the diversity of the stakeholders included. They included practitioners from speech and language therapy and education, in addition to service users. The inclusive approach, and the

Careful sampling of representative groups of stakeholders maximises the acceptability of the premises for collaborative practice.

Implications of the research studies

One implication from this research concerns inter-professional education (IPE). Increased IPE opportunities are required for SLTs and teachers, both when training and as part of ongoing professional development, if they are to develop dual professional identities. Frameworks based on socialization theory have been developed in other healthcare contexts, and these could inform IPE initiatives (Khalili *et al.* 2013). Opportunities to discuss and debate the uni-professional assumptions which underpin their work could also be incorporated into such IPE opportunities. Undertaking such IPE requires regular and ongoing contact between trainee SLTs and teachers and currently, in Ireland, opportunities for IPE are extremely limited. The need to understand the barriers and facilitators to IPE in Ireland is therefore important. It is also important to assess the effect of such IPE initiatives on improving inter-professional collaboration.

In terms of professional practice, children with DLD need to be included in all decisions made about their support in school. As discussed previously, this requires practitioners to listen to each child. Listening in this context is not the same as asking questions to which the practitioner wants answers. Rather, it involves working together to create meaning (Clark 2004). For this to be achieved, specific participatory methods of engagement are required. There are many practical techniques that a child can use to gather information about their life in school to inform the

decision-making process. Examples include *photovoice* and *video diaries* which allow the child to record, in photos or by video, a typical school day (Wang and Burris 1997; Darbyshire *et al.* 2005). Data gathered by the child in this way can be used to identify barriers to their learning and participation, and to inform actions needed to address such. Practitioners need to use multiple means of communication when engaging a child in such a discussion (Clark 2004; Gallagher *et al.* 2018). A key implication for practice is the need for SLTs and teachers to develop their knowledge and skills in the use of such participatory techniques.

It is important to acknowledge that giving the child influence in decisions about support requires practitioners to work in a responsive and flexible way. Depending on the priorities and preferences of the child, they may need to develop new methods that are not part of their usual remit. This is in contrast to many current speech and language therapy service delivery models of working in schools, which involve adhering to standardised, prescribed supports and teacher practice. Thus a further implication from this research is the need for SLTs and teachers to develop enhanced problem-solving skills. According to Martin (2008), such learning is best undertaken together. Virtual inter-professional communities of practice have been piloted across a range of healthcare contexts with positive results (Wenger 2011; Ranmuthugala *et al.* 2011; Alali and Salim 2013) so this approach might enhance SLT/ teacher IPC.

The findings have implications for SLT assessment. Rather than assess a child's language impairment to prescribe specific interventions for improving speech and language, a central focus of assessment may include

analysing classroom discourse to determine the adaptations required to ensure a child with DLD can learn and participate. Further analysis of language use in less structured speaking situations in school is also indicated, such as in social contexts involving “peer to peer” talk. This can inform decisions about how best to equip a child to connect with their peers. These analyses are not routinely undertaken by SLTs working in schools. Speech and language therapists may therefore need to extend their knowledge and skills of such approaches.

A further implication is the need to develop effective methods of implementing changes to practices in classrooms. For example, coaching and the use of video-interaction analysis have been shown to be effective in changing the language behaviours of teachers, which in turn has resulted in improved language outcomes for children with SLCN (Starling *et al.* 2012; Lofthouse *et al.* 2016). With the necessary support and training, SLTs and teachers could use these methods in their practice. However, to do this they require protected time together which has resource implications if SLTs and teachers are to implement changes in practice.

Key implications for SLT service planners include the need to collect outcome measures that include the views of children in order to evaluate the responsiveness of the service; and for collaborative leadership (Chrislip 2002; Vangen and Huxham 2003) to enable effective networks to be established across health and education. Such collaborative networks may then be evaluated as a key performance indicator for SLT services.

This research has highlighted the need for those living with DLD and/or SLCN to have influence at a wider policy level. For example, service

users should be acknowledged as stakeholders by the IASLT. They should be involved in lobbying government about SLCN, and be consulted on changes to service and policy at a national level. A substantial body of knowledge from the broader disability literature is available, which could be applied to the field of speech and language therapy to ensure that the interests of those living with the condition are represented in proactive and principled development of policy (Jason *et al.* 2004; Priestley *et al.* 2010; Iriarte *et al.* 2014; Hill *et al.* 2016).

Finally, a critical piece of the jigsaw is the need to reinforce the rights of the child to be heard when developing Irish disability and SEN legislation. Without such a legal protection, engaging the children with DLD in decisions about their lives will remain an aspiration, rather than a reality.

Future research

Several possibilities exist to build on the findings of this exploratory research. Children with DLD in the study were able to identify several positive changes to enhance their participation and inclusion in school. However, dissemination of the findings of this study was limited to policy makers via a policy brief, and to practitioners and researchers through peer-reviewed publications. Future researchers might engage children with DLD as co-researchers in developing tools for use in schools, to increase awareness about SLCN amongst school staff, and to share strategies about how schools could better support children with these needs. This could involve participatory methodologies, such as a world café (Fouché and Light 2011; Terry *et al.* 2015) where children could develop the content and

design multi-media and/or other visually impactful methods to then disseminate the tools.

Another useful research avenue would be to create a database of current collaborative networks of SLT services and schools across Ireland. Social network analysis could then be used for analysing the quality of the networks (Oliveira and Gama 2012; Aguirre *et al.* 2013). Networks which are identified as effective could be further investigated to establish good practice to inform ways of strengthening others. Exciting research opportunities exist in developing interventions to strengthen these networks. One potential, as described earlier, is to develop and use virtual communities of practice, to then strengthen 'real' networks of SLTs and teachers.

A third area of future research is to examine the use of pedagogical discourse frameworks, already in use with different populations in education (Morais *et al.* 2004; Morais and Neves 2010). This may be a way of optimising discourse in the classroom for children with DLD. A case study methodology (Madill *et al.* 2000) could be used to gather detailed insights into the use and impact of such models/frameworks for children with DLD.

Concluding statements

Understanding and using language is one of the most important and complex developmental skills acquired through childhood. Persistent difficulties in learning language can have significant implications for life (Law *et al.* 2009; Conti-Ramsden and Durkin 2012). Supporting children with these difficulties during the school years is particularly important, as such language difficulties act as a barrier to learning (Dockrell and Lindsay

1998; Dockrell *et al.* 2014). Meeting the needs of the child with DLD in school requires effective inter-professional collaboration (IPC) between the speech and language therapist (SLT) and the child's teacher. Although recognised as a policy priority for decades (United Nations Educational, Scientific and Cultural Organization 1994; Rix *et al.* 2013), SLT/teacher IPC is not routine in practice (Brandel and Loeb 2011; Glover *et al.* 2015).

At the time of planning this doctoral research, differences in perspective between SLTs and teachers had been identified as a barrier to IPC (McCartney 1999; McCartney 2002). Little was known of the preferences and priorities of children with DLD and their parents about supports in school (Roulstone and Lindsay 2012), and dissatisfaction with many SLT models of service delivery to schools had been reported (McCartney 2000; Dockrell and Lindsay 2001; Law *et al.* 2002; Lindsay and Dockrell 2004; McCartney *et al.* 2011).

Given the lack of shared understanding about DLD between SLTs and teachers discussed in the literature, and concerns about the delivery of SLT support in schools (McCartney 2000; Dockrell and Lindsay 2001; Law *et al.* 2002; Lindsay and Dockrell 2004; McCartney *et al.* 2011), there was a need to establish premises to underpin SLT/teacher IPC. Grunwell (1983), in a different context, proposed that premises should be established when there may be disagreement across professional groups when addressing the same aims. She defined premises as “primary, in that they state the fundamental theoretical framework underlying a therapeutic approach” (Grunwell 1983, p.161). These are necessary, according to Grunwell (1983), in order to overtly state a coherent set of underlying principles and then

design procedures (interventions) for practice. In the context of SLT/teacher IPC, such premises needed to be meaningful to all relevant stakeholders.

To achieve this, views of key stakeholders involved in the collaborative planning of supports in school were characterised. From the literature, significant differences were identified in relation to DLD and how these needs can be met in school. These differences suggest a need to increase inter-professional education opportunities for SLTs and teachers. Differences between the children's views of support in school and those of the practitioners were identified in the focus groups and interviews, indicating the unique and important knowledge that a child with DLD brings to decision-making about their inclusion in school. From a Delphi study we showed that consensus was possible between stakeholders about the role of the child in decision-making, the nature of DLD and the goals of collaboration.

From this research four premises to underpin SLT/teacher IPC are proposed: the child with DLD is a being in their own right; DLD is a difference rather than a disorder; language is a tool for learning and connecting; and IPC is a means of ensuring the inclusion of the child with DLD in school. These premises are an important first step to provide a structure upon which to build a coherent set of principles and procedures. They may be also used to guide service planners for designing and evaluating SLT services to schools.

The research was funded by the Health Research Board (HRB) as part of a national (SPHeRE) programme to enhance Irish health services' research capacity. The HRB funding enabled findings of the research to be

disseminated widely at national and international academic conferences across the fields of SLT, education and health services' research. The findings of individual studies have also been disseminated to SLTs across Ireland, to the national clinical special interest group of SLTs working in DLD in Ireland and, by invitation, to those involved in the planning and delivery of the NCSE pilot service. The SPHeRE programme has also facilitated links with researchers interested in improving services and supports in school for children with SLCN in the UK, the USA and Australia. Such links offer the possibility of future collaborations, developing and evaluating practices underpinned by these premises. Dissemination/discussion of the premises are planned with HSE SLT service managers, parents (as part of the national DLD support group) and service planners in the NCSE. An application has been made for funding to disseminate, in the form of a short animation, the findings from the child interviews for staff in schools.

In terms of future research, an application to the Irish Research Council for post-graduate funding will be made to apply the adapted framework for participation (Black-Hawkins 2010) described in Paper IV, using a case study methodology, with school children who have SLCN. This work will be conducted collaboratively with practitioners who are part of the NCSE pilot service in Irish schools (Gallagher et al. 2018).

Improving SLT/teacher IPC in schools is a challenging undertaking. Establishing this agreed set of premises is a positive first step towards the building of cross-professional consensus about IPC. By operationalising

these premises collaborative practices to improve outcomes for children with DLD in Irish schools can now be developed.

References

- Aguirre, N., Carswell, P. and Kenealy, T. (2013) 'Measuring inter-professional integration and influence on integrated care: A social network approach', *International Journal of Integrated Care* [online], available: <http://dx.doi.org/10.5334/ijic.1455>.
- Alali, H. and Salim, J. (2013) 'Virtual communities of practice success model to support knowledge sharing behaviour in healthcare sector', *Procedia Technology*, 11, 176-183.
- Black-Hawkins, K. (2010) 'The framework for participation: A research tool for exploring the relationship between achievement and inclusion in schools', *International Journal of Research and Method in Education*, 33(1), 21-40.
- Brandel, J. and Loeb, D. (2011) 'Program intensity and service delivery models in the schools: SLP survey results', *Language, Speech, and Hearing Services in Schools*, 42(4), 461-90.
- Chrislip, D.D. (2002) *The collaborative leadership fieldbook*, 2nd ed, London: John Wiley & Sons.
- Clark, A. (2004) *Listening as a way of life: Why and how we listen to young children*, London, National Children's Bureau, available: https://exeter.anglican.org/wp-content/uploads/2014/11/Listening-to-children-leaflet_NCB.pdf [accessed 3 April 2019].
- Conti-Ramsden, G. and Durkin, K. (2012b) 'Postschool educational and employment experiences of young people with specific language impairment', *Language, Speech and Hearing Services in Schools*, 43(4), 507-20.
- Creswell, J.W. and Clark, V.L.P. (2007) *Designing and conducting mixed methods research*, 2nd ed., Thousand Oaks, CA: SAGE publications.

- Darbyshire, P., MacDougall, C. and Schiller, W. (2005) 'Multiple methods in qualitative research with children: More insight or just more?', *Qualitative Research*, 5(4), 417-436.
- Dockrell, J., Lindsay, G., Roulstone, S. and Law, J. (2014) 'Supporting children with speech, language and communication needs: An overview of the results of the better communication research programme', *International Journal of Language and Communication Disorders*, 49(5), 543-557.
- Dockrell, J. and Lindsay, G. (1998) 'The ways in which speech and language difficulties impact on children's access to the curriculum', *Child Language Teaching and Therapy*, 14(2), 117-133.
- Dockrell, J. and Lindsay, G. (2001) 'Children with specific speech and language difficulties-the teachers' perspective', *Oxford Review of Education*, 27(3), 369-394.
- Fouché, C. and Light, G. (2011) 'An invitation to dialogue: 'The world café' in social work research', *Qualitative Social Work*, 10(1), 28-48.
- Gallagher, A.L., Tancredi, H. and Graham, L.J. (2018) 'Advancing the human rights of children with communication needs in school', *International Journal of Speech-Language Pathology*, 20(1), 128-132.
- Glover, A., McCormack, J. and Smith-Tamaray, M. (2015) 'Collaboration between teachers and speech and language therapists: Services for primary school children with speech, language and communication needs', *Child Language Teaching and Therapy*, 31(3), 363-382.
- Grunwell, P. (1983) 'Phonological therapy: Premises, principles and procedures', in Edwards, M., Miller, C.J. and de Montfort-Supple, M., eds., *XIXth Congress of the International Association of Logopedics and Phoniatrics*, University of Edinburgh, Scotland, 14-18 Aug, Switzerland: Karger, available: <http://dx.doi.org/10.1159/000316868>.

- Hill, V., Croydon, A., Greathead, S., Kenny, L., Yates, R. and Pellicano, E. (2016) 'Research methods for children with multiple needs: Developing techniques to facilitate all children and young people to have 'a voice' ', *Educational and Child Psychology*, 33(3), 26-43.
- Iriarte, E.G., O'Brien, P. and Chadwick, D. (2014) 'Involving people with intellectual disabilities within research teams: Lessons learned from an Irish experience', *Journal of Policy and Practice in Intellectual Disabilities*, 11(2), 149-157.
- Jason, L.A., Keys, C.B., Suarez-Balcazar, Y.E., Taylor, R.R. and Davis, M.I. (2004) *Participatory community research: Theories and methods in action*, Washington DC: American Psychological Association.
- Khalili, H., Orchard, C., Laschinger, H.K.S. and Farah, R. (2013) 'An interprofessional socialization framework for developing an interprofessional identity among health professions students', *Journal of Interprofessional Care*, 27(6), 448-453.
- Law, J., Lindsay, G., Peacey, N., Gascoigne, M., Soloff, N., Radford, J. and Band, S. (2002) 'Consultation as a model for providing speech and language therapy in schools: A panacea or one step too far?', *Child Language Teaching and Therapy*, 18(2), 145-163.
- Law, J., Rush, R., Schoon, I. and Parsons, S. (2009a) 'Modeling developmental language difficulties from school entry into adulthood: Literacy, mental health, and employment outcomes', *Journal of Speech, Language and Hearing Research*, 52(6), 1401-1416.
- Lindsay, G. and Dockrell, J. (2004) 'Whose job is it? Parents' concerns about the needs of their children with language problems', *Journal of Special Education*, 37(4), 225-235.
- Lofthouse, R., Flanagan, J. and Wigley, B. (2016) 'A new model of collaborative action research; theorising from inter-professional

- practice development', *Educational Action Research*, 24(4), 519-534.
- Madill, A., Jordan, A. and Shirley, C. (2000) 'Objectivity and reliability in qualitative analysis: Realist, contextualist and radical constructionist epistemologies', *British Journal of Psychology*, 91(1), 1-20.
- Martin, D. (2008) 'A new paradigm to inform inter-professional learning for integrating speech and language provision into secondary schools: A socio-cultural activity theory approach', *Child Language Teaching and Therapy*, 24(2), 173-192.
- McCartney, E. (1999) 'Barriers to collaboration: An analysis of systemic barriers to collaboration between teachers and speech and language therapists', *International Journal of Language and Communication Disorders*, 34(4), 431-40.
- McCartney, E. (2002) 'Cross-sector working: Speech and language therapists in education', *Journal of Management in Medicine*, 16(1), 67-77.
- McCartney E (2000) 'Include us out? Speech and language therapists' prioritization in mainstream schools', *Child Language Teaching and Therapy*, 16(2), 165-180.
- McCartney, E., Boyle, J., Ellis, S., Bannatyne, S. and Turnbull, M. (2011) 'Indirect language therapy for children with persistent language impairment in mainstream primary schools: Outcomes from a cohort intervention', *International Journal of Language and Communication Disorders*, 46(1), 74-82.
- Morais, A., Neves, I. and Pires, D. (2004) 'The what and the how of teaching and learning: Going deeper into sociological analysis and intervention' in Davies, B., Morais, A. and Muller, J., eds., *Reading Bernstein, researching Bernstein*, Abingdon: Routledge, 75-91.

- Morais, A. and Neves, I.P. (2010) 'Basil bernstein as an inspiration for educational research: Specific methodological approaches', in Singh, P., Sadovnik, A. and Semel, S., eds., *Toolkits, translation devices and conceptual accounts: Essays on Basil Bernstein's sociology of knowledge*, Nova Iorque: Peter Lang, 11-32.
- Oliveira, M. and Gama, J. (2012) 'An overview of social network analysis', *Wiley Interdisciplinary Review-Data Mining and Knowledge Discovery*, 2(2), 99-115.
- Priestley, M., Waddington, L. and Bessozi, C. (2010) 'Towards an agenda for disability research in europe: Learning from disabled people's organisations', *Disability and Society*, 25(6), 731-746.
- Ranmuthugala, G., Plumb, J.J., Cunningham, F.C., Georgiou, A., Westbrook, J.I. and Braithwaite, J. (2011) 'How and why are communities of practice established in the healthcare sector? A systematic review of the literature', *BMC Health Services Research* [online], available: <https://dx.doi.org/10.1186/1472-6963-11-273>.
- Rix, J., Sheehy, K., Fletcher- Camppbell, F., Crisp, M. and Harper, A. (2013) *Continuum of education provision for children with special educational needs;a review of international policies and practices*, available: <http://www.ncse.ie/uploads/1/Continuum of Provision website summary.pdf> [accessed 3 April 2019].
- Roulstone, S. and Lindsay, G. (2014) *The perspectives of children and young people who have speech, language and communication needs, and their parents*, London: Department of Education, available: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/219633/DFE-RR247-BCRP7.pdf [accessed 2 May 2019].
- Starling, J., Munro, N., Togher, L. and Arciuli, J. (2012) 'Training secondary school teachers in instructional language modification techniques to support adolescents with language impairment: A

randomized controlled trial', *Language, Speech, and Hearing Services in Schools*, 43, 474-95.

Terry, J., Raithby, M., Cutter, J. and Murphy, F. (2015) 'A menu for learning: A world café approach for user involvement and inter-professional learning on mental health', *Social Work Education*, 34(4), 437-458.

United Nations Ministry of Educational, Scientific and Cultural Organization (1994) *The UNESCO salamanca statement*, Paris:UNESCO, available: http://www.unesco.org/education/pdf/SALAMA_E.PDF [accessed 2 May 2019].

Vangen, S. and Huxham, C. (2003) 'Enacting leadership for collaborative advantage: Dilemmas of ideology and pragmatism in the activities of partnership managers', *British Journal of Management*, 14, (1), 61-76.

Wang, C. and Burris, M.A. (1997) 'Photovoice: Concept, methodology, and use for participatory needs assessment', *Health Education and Behavior*, 24(3), 369-387.

World Health Organization (2011) *World report on disability*, Geneva: WHO Press, available: http://www.who.int/disabilities/world_report/2011/en/index.html [accessed 22 Nov 2018].

Appendices

Appendix 1: Observer checklist

Observer:

Date:

Length of group:

Participants:

F.G. Questions	Observations <i>(write down anything that you notice about what is happening during the discussion)</i>
What are your views about people working together?	
Do you believe SLTs/teachers can change what they do?	
Tell me about a brilliant service you accessed	
If you had three wishes for this child, what would they be?	
It is five years in the future, all of your wishes have come true. What do you see?	

What did you notice about the dynamic between the stakeholders?

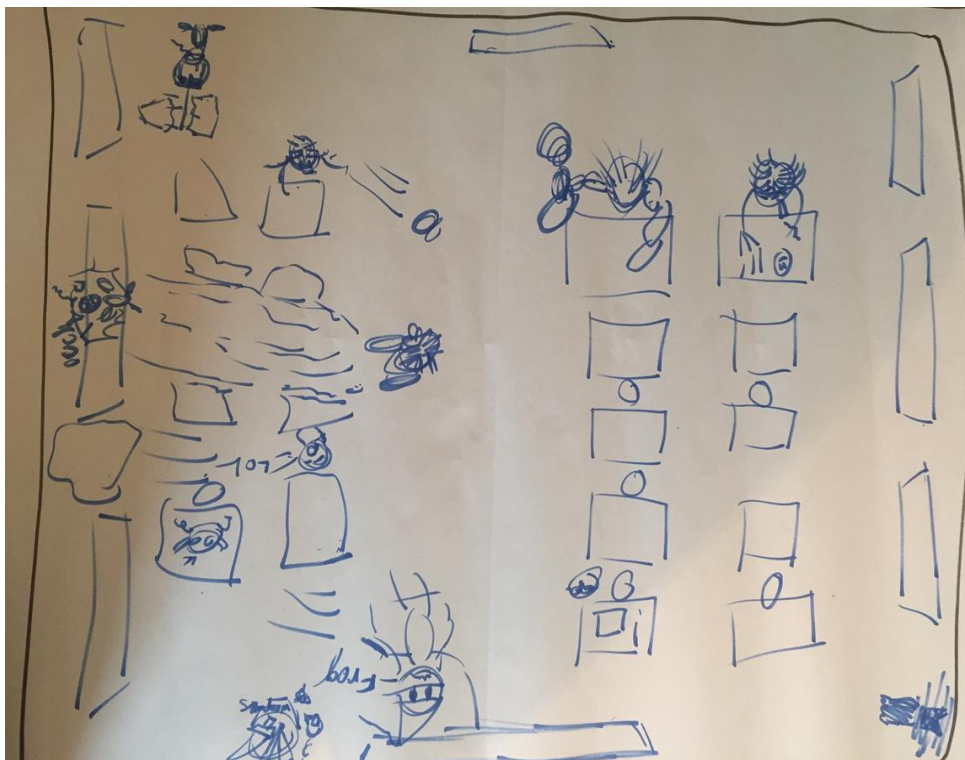
How easy do you think it was for participants to create a collective vision?

Who was most chatty in the group?

Was there any participant who you felt didn't or couldn't participate? Why do you think that was?

Anything else that springs to mind about what was *not* asked/ *not* expressed (silences etc)?

Appendix 2: Sample 'draw and tell' picture and quote



Researcher: Tell me about the students in your classroom?

Participant: See these children (points to picture). They like each other.

They like each other, because ... normally people don't like them because ... they are very strange ... see here (points to picture)... they are strange ... and normally they just don't like them ... but here in this class they got each other ... so that's nice. They are a bit strange on their own but when they come together it doesn't matter. So they don't care they are strange in this class. Strange is good in this class.

Appendix 3: Study poster (children)

Young people needed for research study

Can you help?

What is the research about?

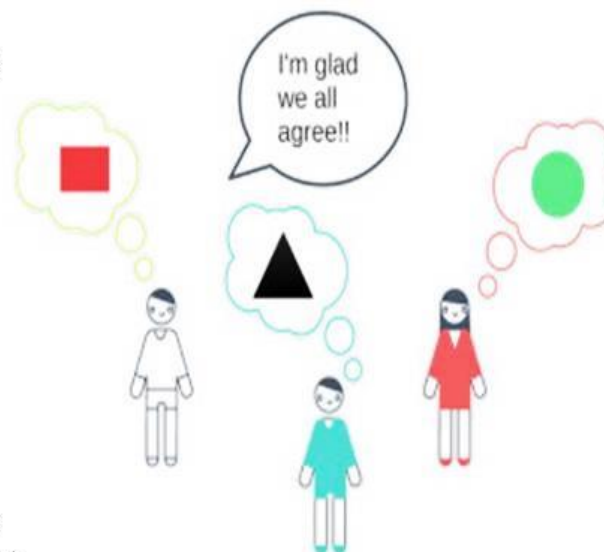
We want to hear your views on how teachers, parents and speech and language therapists can work together to help you in school.

Who can participate?

You need to be between age 9 and 13 and find talking and understanding hard.

What do I have to do?

You will need to meet the researcher and chat about what the best school ever would be like.



When & Where?

Month: April/May 2017
Time: After school (3.30pm to 4.30pm)
Place: Wherever suits

Who can I contact to find out more?

Contact name: Aoife Gallagher
Address: Department of Clinical Therapies,
University of Limerick.
Tel: 061 234986
Email: aoife.gallagher@ul.ie

The University of Limerick Education and Health Sciences Research Ethics Committee has approved this study [approval number : 2016_12_15_EHS]



Appendix 4: Study poster (parents)

Parent/carers volunteers wanted for a research study

What is the research about?

We aim to develop a framework to support a shared understanding between SLTs, teachers and parents so that they can work better together.

Who can participate?

Any parent/carers of a school-aged child with speech, language and communication needs.

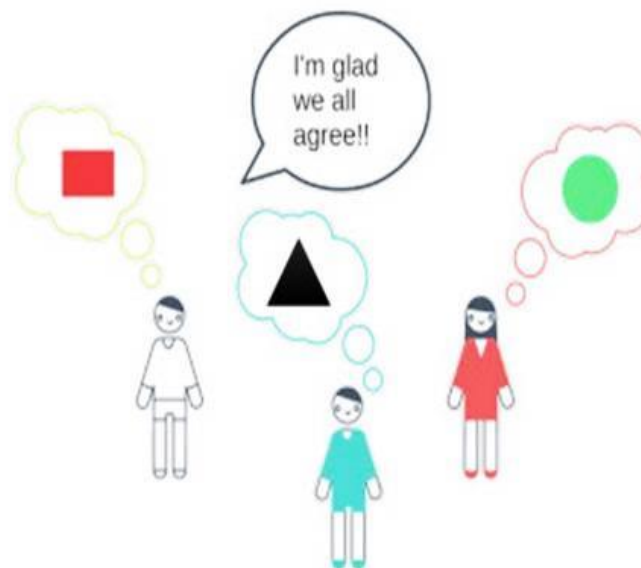
When & where?

Month: April/May 2017

Time: flexible

Venue: flexible

Can you help?



What's involved?

You will be invited to a meeting with the researcher. This can be the same day as your child comes if you both wish to be involved. You will get a chance to tell the researcher about your vision of the ideal SLT service for school-aged children with SLCN

Who can I contact to find out more?

Contact: Aoife Gallagher
Address: Department of Clinical Therapies,
University of Limerick.
Tel: 061 234986
Email: aoife.gallagher@ul.ie

NB: If you would like to be involved but would prefer a one to one session, that's no problem. Just get in touch!

The University of Limerick Education and Health Sciences Research Ethics Committee (EHSREC) has approved this study [approval number : 2016_12_15_EHS]



Appendix 5: Child assent form



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O L L S C O I L L U I M N I G H

CHILD ASSENT FORM

Study name: Supporting parents, teachers and speech and language therapists to work together better to help children with speech and language difficulties in school.

It is important that you understand the study and that you are happy to be part of it.
Here is some more information to read:

I understand that I will come to a meeting and that I will do some activities like drawing and talking.



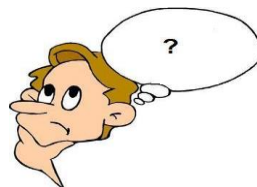
I understand that we will talk about school



I understand that we will talk about my best classroom and school ever



I understand that the researcher will think about what I have said afterwards and write about it. Nobody will know they were my ideas



I understand that if I don't like an activity I can stop whenever I want and nothing bad will happen to me





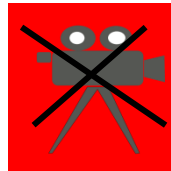
UNIVERSITY of LIMERICK
OLLSCOIL LUIMNIGH

Nearly there! In this bit, you need to think about being video recorded. Read the two sentences first and then tick the box which you are most happy with:

I understand that there will be a video camera. I understand I can ask to turn it off if I feel uncomfortable.

☐

I do not want a video to record what I say.

☐

If you are happy to be part of the study, please sign below.

Name of child: (please print): _____

Name of parent/carer: (please print): _____

Child Signature : _____ Date : _____

Parent Signature : _____ Date: _____

Investigator's Signature : _____ Date: _____